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SEPTEMBER 2000

NO. 49

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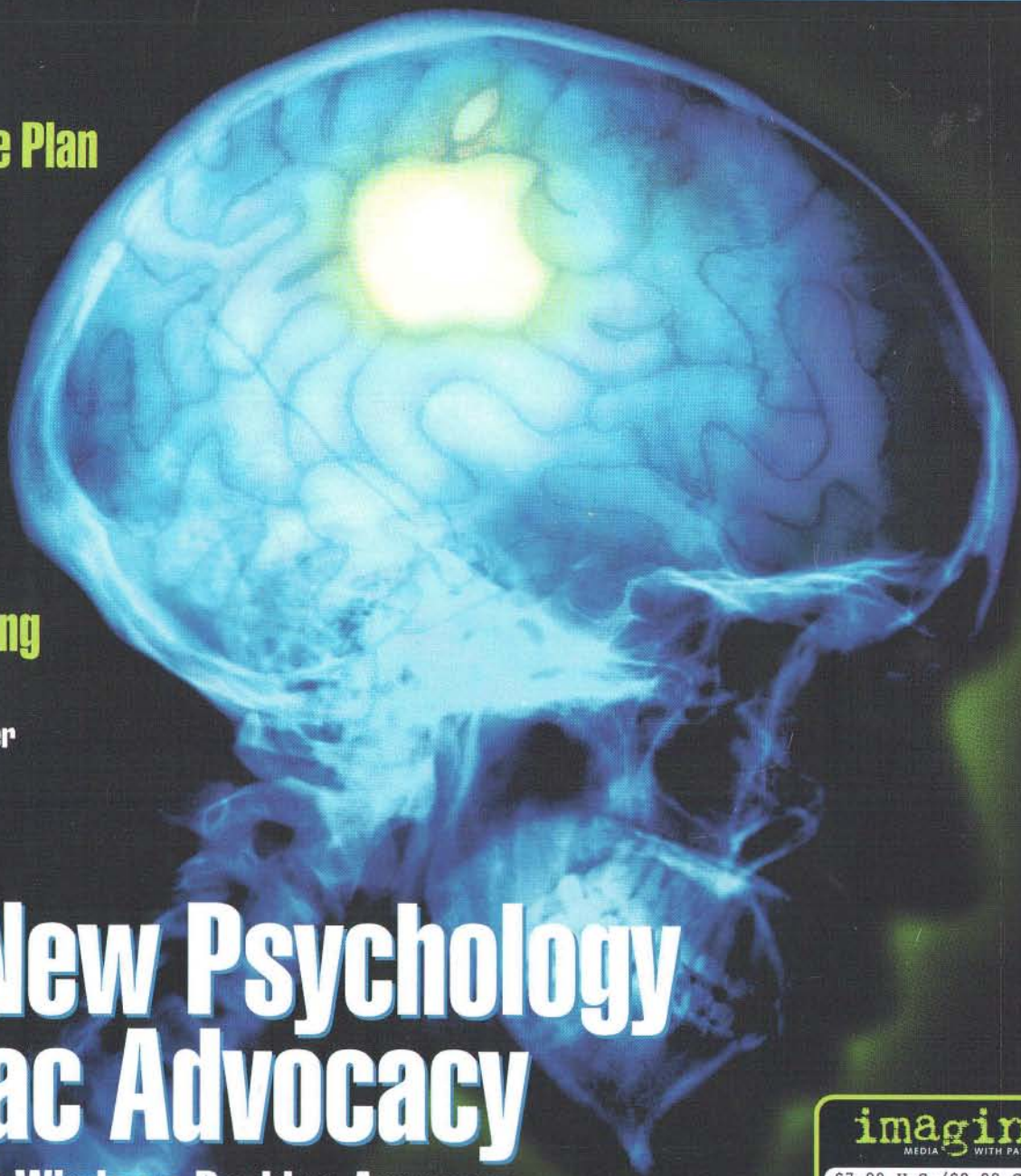
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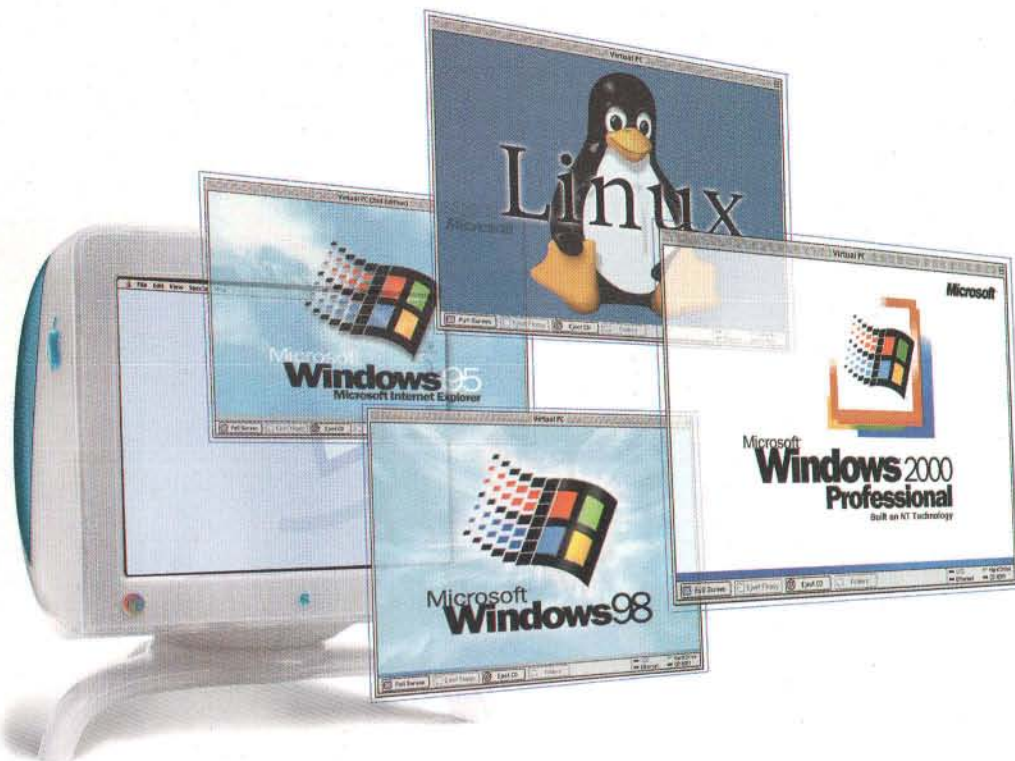
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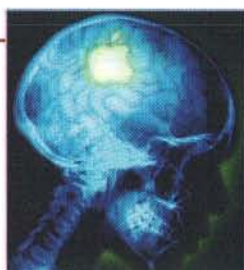
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HMM...WHAT'S the rest of his brain thinking about?



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Volume 5, Issue 9

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EDITOR IN CHIEF Robert Capps

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ART

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Imagine Media, Inc.
150 North Hill Dr., Brisbane, CA 94005
(415) 468-4684, <http://www.imagemedia.com>

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BUST OUT THE DROOL CUPS!
It's wafer-thin!

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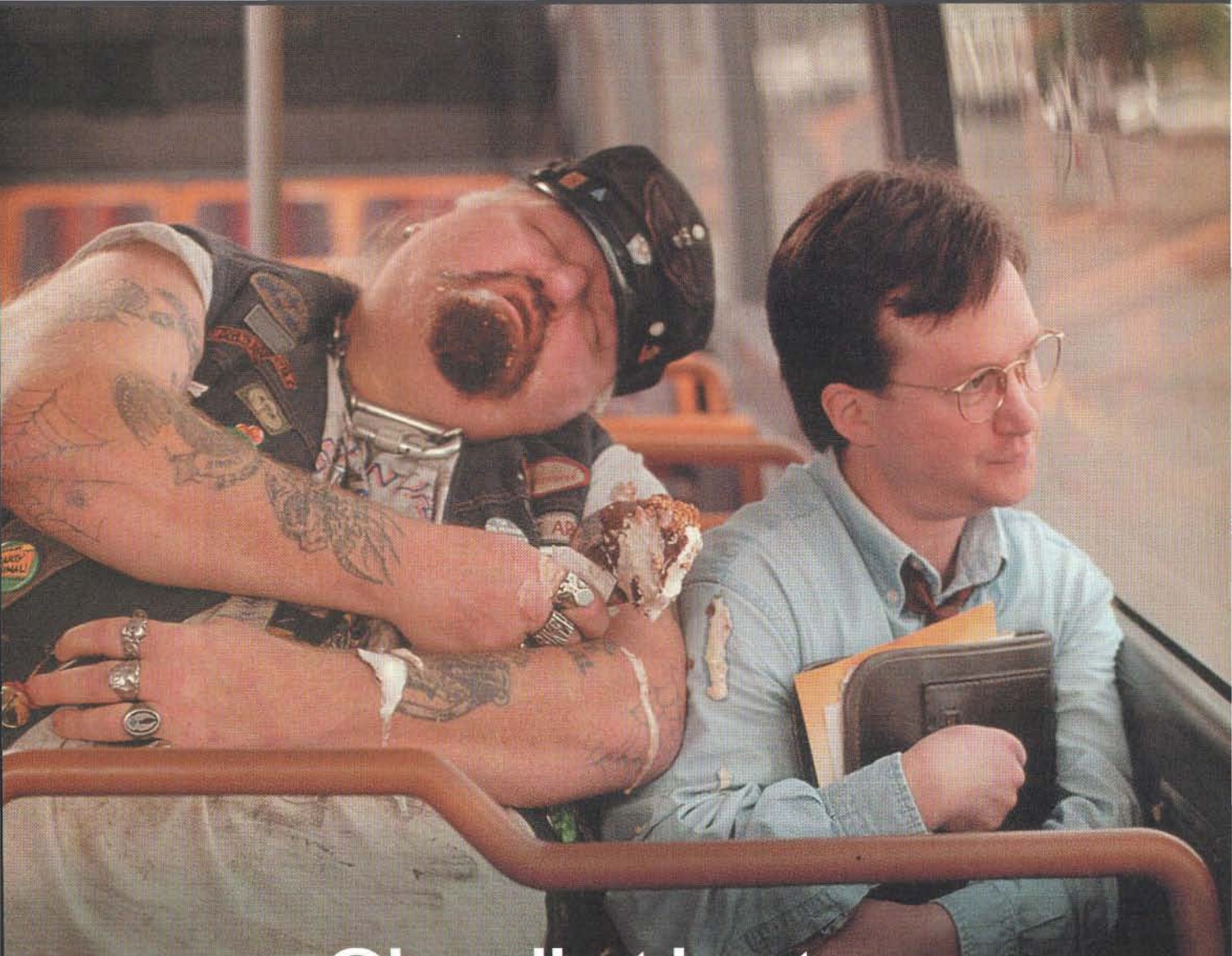
IT'S A BIRD! It's a plane!
It's a...Ford Fiesta?



Welcome, Andrew—take off your coat and stay awhile. Goodbye Hi-fives.
Jägermeister, Niko? Righteous telefrag!



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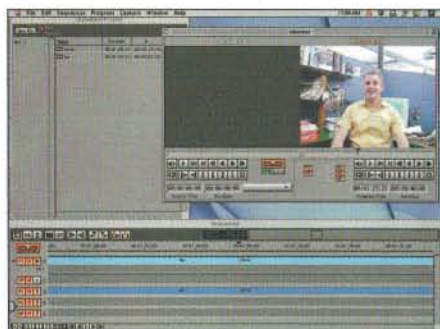
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BLUEBERRY, GRAPE, LIME, strawberry, tangerine...yellow? What, no graphite?

september's cheesy highlights

EditDV Unplugged 1.6.2 Full Version with Media Cleaner EZ

And you were jealous of all those iMac DV owners who flaunted iMovie in your face. iMovie may be free now, but so is this movie-making package just for you. Edit digital video like a pro with this nonlinear video editor and throw in a few special effects to detract from any bad acting—hey, now why didn't we think of that? You'll also get a diet version of Media Cleaner to slim down and clean up your movie files. If you enjoyed the demo version we brought to you a few months back, you'll really appreciate this fully functional special treat.

Firefall 2.0

In this day and age, when retro continues to dominate all shiny new things, Firefall pops up as the latest entrant in reissues. Seven years ago, Pangea originally published this addictive, fast-paced arcade shooter in the same vein as Centipede. Now it has revamped it to run on current Macs. Defend your territory against the fiercely frantic Fireworms, who threaten to invade your mineral fields and have you for dinner. Blast the beasts with your firearms as they come charging—before they label you a Kentucky-fried chicken.

Kaleidoscope 2.2.3

Much safer than an acid peel—give your Mac a complete facelift with this master of a thousand disguises. Using plug-ins called *schemes*, this application will visually overhaul just about every aspect of your desktop—windows, icons, dialog boxes, buttons, even the Trash. Plus, as an added treat, we've included over 100 schemes—created by some of the most talented scheme designers around—that you can try on for size. You'll find them individually packaged on The Disc this month.

Burning Monkey Puzzle Lab 1.0

Looks like those guys at Freeverse have been monkeyin' around again! This time they've cooked up a concoction of lab coat-parading simians who taunt you in the name of science with their challenging brain game. This amusing and addictive Tetris-style game has you juggling groups of colorful globules that tend to split apart on impact. Just don't let your container fill up, or they'll make a monkey out of you.

MEET NEW ASSOCIATE ART DIRECTOR

Chris Imlay and watch him squirm as we subject him to a few off-killer questions in our new-kid hazing. Find out why he prefers tarantulas to cockroaches as his delicacy du jour.





Knees Banging Your Chin?

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editor's note

Somewhere in the heavens...

I once joked that I first got a job at *MacAddict* by beating all the other candidates at a game of Bungie's *Marathon*. This is, of course, untrue, but I have always felt that I owe my Mac-journalism career somewhat to that hugely addictive game.

Even though I had worked on Macs since my dad brought one home in the mid-eighties, eventually working up to wielding a Quadra as a graphic designer for my college magazine, I didn't really fall in love with the machine until the early nineties. I became hooked when a friend took me to the Adobe campus and treated me to a quick network battle on the original *Marathon* Arena map across Adobe's substantial LAN. I was amazed. I had a PowerPC Performa 6116 and quickly learned everything I could about networking to ready my Mac for *Marathon*-multiplayer games. I delved into extensions, RAM requirements, cache settings, and system updates, trying to tune my Mac to get the best possible frame rates across a LocalTalk network.

If you're a fan of Bungie like me, you probably felt a little stunned over the announcement that Microsoft had purchased Bungie in late June. Microsoft has now slated Bungie as a game developer—possibly the *premier* one—for Microsoft's Xbox gaming console. Bungie hasn't yet announced that it plans to stop making games for the

Mac, but I think it probably will. The Mac's market share, when it comes to games, is just too small, and Bungie's star is just too bright. When I talked with Bungie cofounder Jason Jones shortly after the Microsoft buyout announce-

ment, I found that the Mac community was definitely weighing on his mind. Bungie got its start on the Mac, and Jason and his cohorts love the platform. But they also love to make great games, and their deal with Microsoft will put them at the forefront of gaming's next big thing.

Read our "Game Over?" story (*Get Info*, p18), and you'll see that the exciting Mac gaming future for which we've all been hoping just isn't on the horizon. Even the PC market is facing hard times. It's time we Mac gamers faced the reality: Companies such as MacSoft and Aspyr will surely continue to bring us a few goodies a year, but if game sales remain stagnant, we're not likely to see Mac gaming reinvigorated. If you want to play the latest, greatest games, buy a console. I hope you can take some solace in the fact that at least Bungie's future is bright. I've talked with the gaming experts, who assure me that the Xbox is going to blow everything else away. Its technology is more sophisticated and its developer environment more enticing than that of the Dreamcast, Nintendo Dolphin, or Sony PlayStation2.

If you're like me, you're a Bungie fan as well as a Mac fan. When the Xbox hits store shelves, I'll be the first in line to buy one, along with my copy of *Halo*.

Staff Rants

David Reynolds

Executive Top-Sites-on-the-Web Editor

Q. What's your all-time favorite Mac game?

A. My all-time favorite Mac game is either *Marathon* or *WarCraft II*. I lost hours upon hours playing each of those games. *Marathon* was the first computer game I ever played that actually creeped me out. When I first started playing, I kept the lights on.

Q. If we decided job titles with *Marathon*, what would your position be?

A. Assistant Chief Bob-Popper and Door Opener.

Chris Imlay

Associate Art Director, Class Clown

Q. What's your all-time favorite Mac game?

A. I'd have to say the *Marathon* series. Back when there was nothing else, it gave my work-mates and I hours of blissful fragging within those multiplayer levels. Those were good times. (Sigh.)

Q. If we decided job titles with *Marathon*, what would your position be?

A. You might be thinking, "Don't get cocky," like Han Solo or something, but I'd at least be the art director.

David Ross

Art Director, Heretic

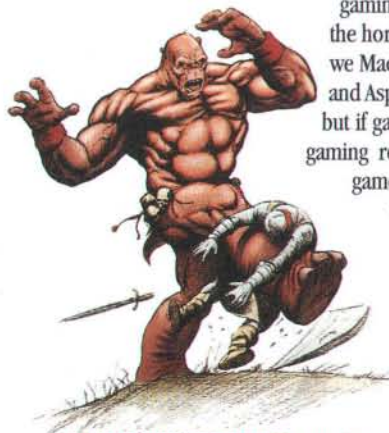
Q. What's your all-time favorite Mac game?

A. That's easy. *Doom*, no doubt. While the lesser beings lurking around here seem to think *Marathon* is the heir to the first-person-shooter throne, *Doom* was by far the best game, as well as the biggest boost to the gaming industry since *Pac-Man* (or *Dig Dug*).

Q. If we decided job titles with *Marathon*, what would your position be?

A. Who cares? Already these henchmen of a lesser god are trying to steer me from the right path. Be gone, you hate-mongers! Be gone!

It's time we Mac gamers face the reality: If game sales remain stagnant, we're not likely to see Mac gaming reinvigorated.



JUST THINK OF THAT little warrior as Mac gaming...ouch!



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Letters

Gabba, gabba, gabba, hey!



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WOW, THAT'S EERIE

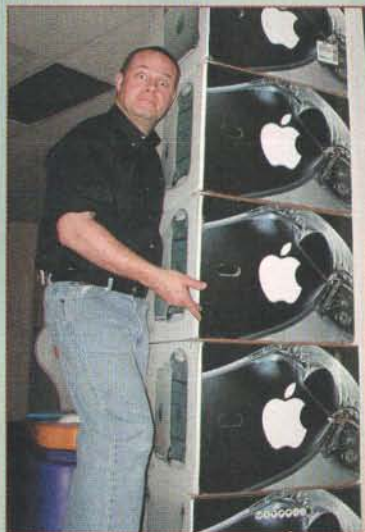
Do you people just sit around all day pushing buttons to see what happens and then play Unreal Tournament?—JOHN FILIOS

MICROSOFT'S MARATHON IS PRETTY COOL

What the heck is wrong with LucasArts?! Everybody else is making games for Mac, but all we've gotten from Lucas is a racing game.

Recently Sighted

We have a large design studio (30-plus Mac clients, four AppleShare IP Servers, and one cinema display), full of illustrators, designers, art directors, programmers, content editors, and Web designers. I call this picture "Retooling the Studio."—STEVE BRAND



HERE ARE ALL YOUR G4s for catching typos.



I AM your father.

What's the deal? Why should Mac users have to drool while PC users can go around killing droids with lightsabers, and turning their friends into cyberslag in an X-wing? I mean, even the evil Microsoft is making games for Mac. How the heck did LucasArts get worse than the Evil Empire?—ARTHUR SAYRE

HEARING THAT MAKES IT ALL WORTHWHILE

MacAddict is an amazing publication. I buy it every month and read it cover to cover. You all have a great sense of humor, a vast knowledge of what it takes to appease fellow Mac addicts, and good, unbiased reviews of the newest and most usable software and hardware. But the best thing about *MacAddict* is...pulling the adhesive off the back of the cardboard (you know, the sticky stuff that keeps The Disc glued to the magazine). That's so much fun!

—LETHBRIDGE ALBERTA

YOU WANT BAD HACKER SLANG FOR CHRISTMAS?

While ordering holiday wares online is a good idea and saves you time ("365 Days," Jul/00, p30), who wants holiday wares? Holiday wares are what you meant to say, right? There's a gift I'd like for Christmas!—JOEL CRETAN

DOES AMAZON KNOW ABOUT THIS?

Reading "365 Days," I noticed that your first tip is to download Internet Explorer and trash Netscape forever. In your dreams! I like Explorer a lot, but there's one thing it still needs to do before I'll trash Netscape: When I read a news-

paper article, Netscape allows me to email the entire article and URL with one click. Explorer sends only the URL.

—EGIDIO LEITAO

SOME THINGS ARE JUST SECRET

Thanks for the calendar. Nowhere in the magazine, however, could I find any tips or tricks related to the illustrations on pages 30 and 31. So in future issues, I'd really like to see articles on how to do the following:

1. Launch an iMac with fireworks.
2. Make a backpack out of an iMac shell.
3. Use input devices as batons for relay races.
4. Use an iMac as a Halloween decoration.
5. Cook up a Mac for Thanksgiving.
6. Use a laptop as a sled—and make the Apple logo out of snow.
7. Bench-press G4s.
8. Exchange love messages over networked iMacs.
9. Make cloverleaves out of iMacs.
10. Make Macs look like Easter eggs.
11. Dust out the inside of a minitower.
12. Find iBooks at the bottom of the ocean.

—PAT MCCARTHY

OUR BAD

I think you owe all of us true Mac addicts an apology regarding your rather distasteful suggestion in the June issue ("365 Days," p32). I refer, of course, to the suggestion that we spend a day (shudder) without a Mac. What were you thinking?—LEWIS BUTLER

WE KNEW

Last Thursday I checked my handy Word-a-Day calendar and found that the word of the day was *dross*. Then, I remembered that in your staff videos, you gave your art director David Ross this name as a contraction of his first and last name. I don't think David will be very pleased to know what this word means.

dross \dräs\ n

- 1: The scum that forms on the surface of molten metal
- 2: Waste or foreign matter; impurity
- 3: Something that is base, trivial, or inferior

My only question: Did you know you've been insulting your excellent art director all this time?—MATT LAQUIDARA

That explains a lot...my ex-girlfriend gave me that nickname!—DR

SWITCH HITTING

I just read the July article on the App Switcher ("How to Tap into App Switcher," p84). I got excited because recently I found a secret in the App Switcher. Do you remember the ol' "secret about box" pong game on Macs with Mac OS 7.5? Well, that secret (not the pong game) still exists in the Application Switcher. A couple of months ago I was looking at the Application Switcher through Resourcer when I found these words at the bottom of all the junk: *secret about box*. I went to Note Pad and typed "secret about box." Then I selected the words, dragged the selection to the Application Switcher, and boom! Up scroll the credits for Application Switcher!—KEVIN WOJNIAK

ONE WORD: TELEFRAG

All you have in your magazine now is Unreal this and Unreal that. You give out all the good info for skins and everything else for Unreal. I know it's a good game, but I think Quake III: Arena is better. Please try to give out some good Quake Web sites and other info in the next few issues. —KEN ORISEK

HOW THICK IS HER BEARD?

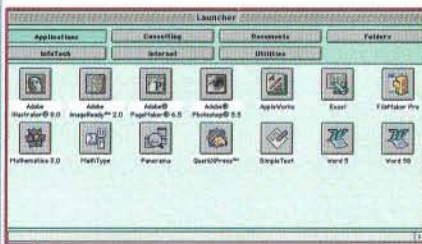
Please, enough of the look-alike picture comparisons from readers who don't get out enough (*Letters*, Jul/00, p16). If I put a mustache on my grandmother's picture, they would swear it was Wozniak.—ANDY SCHELZ

WHAT DO YOU DO WITH THE FLAG?

In Unreal Tournament, wouldn't it be nice to play Facing Worlds as a deathmatch? Well, I figured out how to make any map that starts with CTF, AS, or DOM into a deathmatch. First make a copy of the map (say, ctf-Face), then change ctf to DM. That's it—now your favorite CTF map is a deathmatch map. Happy fragging.—ANDY REED

WHAT'LL OUR FRIENDS THINK

It's hard to believe you find it easier to manage a Mac via tabbed windows than with Launcher ("Using Tabbed Windows to Build a Better Launcher," Jul/00, p86). With Launcher, you create an alias by simply dragging an item to a Launcher panel. The alias is listed alphabetically and acts as a button. Once you have an alias in a panel, you can



IS IT COOL to use the Launcher?

just select the panel and click that icon to open the alias. You almost never need to close the Launcher window, so it is always right at hand. The process is quicker than finding a tabbed window, opening it, and clicking the desired item. Moreover, one must eventually send the window back to its tabbed position.—LARRY MANSFIELD

WE'RE STILL NOT SHOWING YOU OURS

Here are the attached files for a real Apple tattoo I got in New York in July 1999 while attending Macworld Expo. No, they weren't tattooing people at the Expo—I got this at a body art parlor on Canal Street.

—DAN BUGHAN

I am now among the truly devout, as I recently got my first tattoo—and it is the six-color logo on my ankle. I guess you could call me pleasantly obsessed!—KATHERINE (AKA BONDIBLUE2)



HAVE YOU EVEN read Apple's logo usage guidelines?



FIREWIRE 1394 TO SCSI CONVERSION



For Zip, Scanners, Hard Drives, and other SCSI Devices.

The Orange Converter is a unique device for Mac and PC users allowing SCSI peripherals to connect to FireWire 1394 ports.

The Orange Converter easily attaches to any Macintosh FireWire port or any Windows based PC that has FireWire ports, and converts all SCSI data from your SCSI peripheral, both input and output.

iMac owners with FireWire ports can now have access to SCSI peripherals. Macintosh G3 and G4 owners who are "slot challenged" can use the Orange Converter to save a valuable PCI slot by removing any existing SCSI PCI host adapter card, and replacing the SCSI functionality with the Orange Converter.

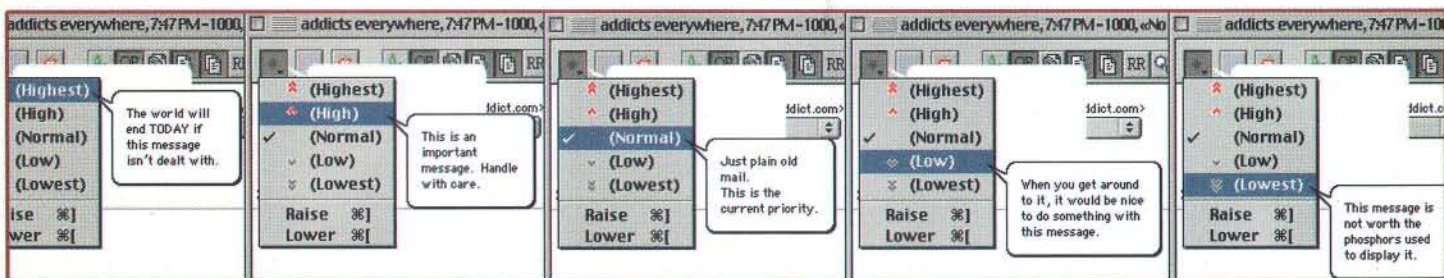
The Orange Converter is limited to a single SCSI device, however, most devices once connected to the Orange Converter can be hot plugged to a FireWire port. The Fast SCSI data transfer rate is 10 Megabytes/second. This is up to 5 times faster than the existing USB to SCSI converters currently on the market.

The Orange Converter comes standard with a 25 pin SCSI connector, a 6 foot FireWire cable and a power supply.

Get an Orange Converter and connect all your SCSI devices!!



Orange Micro inc.
www.orangemicro.com



PEOPLE DO IT TO US ALL THE TIME

Hey y'all, I was just browsing my computer with the help balloons turned on, and look what I found. Gasp! Can people lower my writings to this?—BENJAMIN WEAVER

OLD-SCHOOL

Rummaging through the closet the other day, I found an old Kensington IIGS System Saver. It matches my iMac nicely!

The iMac is elevated to eye level and the powered outlets on the back of the System Saver work great for those bulky USB peripheral power plugs. I disconnected the noisy fan on the System Saver years ago. Looking at the stack calls to mind Apple past and present.—STEVE HUFF



ISN'T THAT a bit of an anachronism?

IS THAT MADE BY MICROSOFT OR AOL?

When reading *Get Info* in the July issue, I couldn't help but notice that while you mentioned the new Netscape 6 preview as an alternative to Internet Explorer with a weird interface (p26), you completely failed to mention the browser iCab (<http://www.icab.de>). iCab will show almost any Web page as accurately or more accurately than Netscape or Explorer, has built-in image filtering and a configurable contextual menu, and allows you to selectively turn off several annoying tags, such as the blink tag. It also displays an indicator showing the quality of code on the Web pages you visit; you can click this for a full error report (very handy when you're trying to perfect a page).

Also, iCab is Mac only, with no plans for a Windows version. It's a 1MB download and has reached preview release 2.0, which is more stable than the previous versions (and on my system, more stable than Netscape).

It does have some downsides: It's only a browser and doesn't support email or news groups, and its developers haven't completed the CSS2 and Javascript support features. Still, add a copy of Eudora and MT-Newswatcher, and you're all set for the majority of your surfing.

—SHANOA SAGE ALKIRE

IF SHE HEARS THAT ONE MORE TIME...

This is a message for Jenmo: How many times did people tell you how lovely and beautiful you are, especially when you...get mad?

—MARIO FROM GREECE

HACKED HACK

As I was creating an iDisk without Mac OS 9, I hit a snag. When I tried to sign up at Apple's Web site using the address given in your how-to article ("Create an iDisk...Without Mac OS 9," Jul/00, p90), I got blocked. A page came up that said I was not running Mac OS 9 (Why is it telling me? I know that already—I'm running OS 8.1). The message told me I should upgrade. Has Apple blocked this whole workaround, or is there another trick I can use to create my own iDisk?—JONATHAN OHRT

Yep, Apple wised up and changed its Web site, breaking our clever little workaround. We found a newer, skankier hack that still appears to work, however: see http://www.macaddict.com/magazine/plugin/06_06.html for details. Of course, Apple may block that one too by the time you read this—keep an eye on the MacAddict Web site for updates.—IS

AN OPEN LETTER TO BUNGIE

Congratulations on Microsoft's recent acquisition of your company. You have been at the forefront of gaming technology since you started distributing games back in 1991. While the move to the Xbox is risky (will Microsoft have enough clout to topple Sony?), you will be in an excellent position to change the face of gaming yet again.

On the flip side, as an avid Mac user, I am quite saddened, for personal and selfish reasons, about your acquisition by Microsoft. Every single game Bungie has released over the last nine years has been groundbreaking, showing an incredible amount of ingenuity, hard work, and a great sense of humor. These games have kept me staring at my Mac screens for longer than I care to remember. Now that the leading Mac-game developer is essentially out of the Mac gaming market, I'm afraid I won't find any more ingenuity in the games available for my platform of choice. Apart from a few crafty shareware programmers, Mac gaming will consist solely of secondhand PC ports.

I'm writing to you to ask you kindly not to abandon the Mac gaming market when you move to Redmond. While I realize you will be devoting the bulk of your resources to the Xbox, it would be a terrible shame if you abandoned the platform you helped keep alive only a few short years ago. Millions of Mac enthusiasts everywhere love your games. We hope you don't forget about us in the future.

—JEAN-LUC DINSDALE

You Know You're a Mac Addict When...

...your car breaks down and your first impulse is to turn the ignition while holding down the shift key. Your second impulse is to look for copies of ObjectSupportLib under the hood.

—JOSEPH V. KELLY

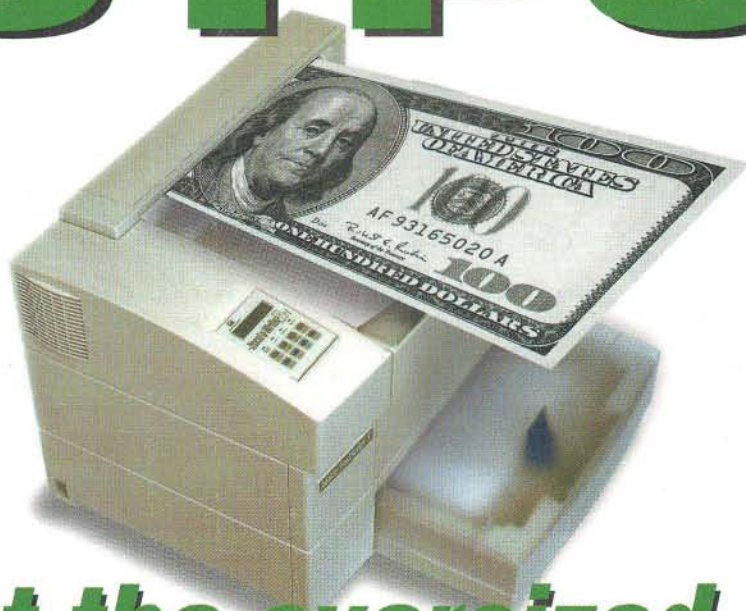
...you notice that the good guys in *Mission Impossible 2* use Macs, the bad guys use PCs, and the Apple Studio Display Flat Panel in the lab shootout scene never gets hit.

—JOHN WIEDENHEFT

...your child says the last part of the alphabet like this: W, 10, Y, Z.

—PHILIP KIRKHAM

OVERSIZED OUTPUT



without the oversized price!

for business

**XANTÉ's
Accel-a-Writer 3N**
starting at

\$1695

Features:

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- 600 dpi, upgradable to 1200 dpi
 - Adobe PostScript 3
- Fast processing and 20 ppm
- High-capacity paper handling

for graphics

**XANTÉ's
Accel-a-Writer 3G**
starting at

\$2795

Features:

- Oversized printing up to 13"x35.5"
- 1200 dpi, upgradable to 2400 dpi
 - Adobe PostScript 3
- Graphics software package
- Fast processing and 20 ppm
- Optional film capabilities



Adobe PostScript 3

Duplexing unit also available for both models.



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get info

Get depressed reading the first two, cheer up on the back four.

Game Over?

Personal Computer Gaming in Trouble—And You Were Worried about Not Getting Halo

If Microsoft's purchase of Bungie in late June made you tremble with horror at the thought that Halo might not come to the Mac, you may have an even worse shock coming. Bungie's move to work on the Xbox—Microsoft's game console rivaling the PlayStation2—is symbolic of a much bigger issue than just our platform's probable loss of a great company's support. As more vendors head for the greener pastures and stabler environments of consoles, the PC games market is starting to suffer seriously—calling into question the notion of gaming on *any* kind of computer.

In the March issue of *Next Generation* magazine (owned by Imagine Media), Eidos president Rob Dyer predicted that the PC would be dead as a viable gaming platform within two years. The reasons Dyer cited for this dreary forecast were the rise of broadband-equipped consoles—such as the Xbox and the PlayStation2—and proportionally low game unit sales on computers as opposed to consoles.

Industry watchers widely regard Dyer's prediction as an overstatement, but the numbers lend a lot of weight to his theory. According to Eidos PR manager Greg Rizzer, a popular PC game sells about 100,000 copies, whereas a successful PlayStation game moves



more than 1 million copies. Best-sellers hit around 1 million on the PC and about 5 million on the PlayStation. (For comparison, one top title from a Mac publisher we contacted sold only around 20,000 copies.) PlayStation games also tend to tank less often than their computer brethren, partly because they have a much longer shelf life.

ANOTHER ONE bites the dust.

Former *Next Generation* editor Chris Charla doesn't agree with Dyer that the PC gaming industry will become extinct, but his vision of the future is not much cheerier.

"Everybody is going console. Everybody sees that as where the money is," he says.

What's an Xbox?

Microsoft to Sell Custom PCs in Console Clothing

With Bungie apparently mesmerized by the Xbox, Microsoft's new console deserves a closer look. The Xbox's hardware looks extremely familiar—it's identical in many ways to a custom PC built for gaming from the ground up. The machine has an Intel Pentium III processor, a powerful NVIDIA 3D graphics processor, an 8GB hard drive, a 4X DVD drive, and 100-Mbps Fast Ethernet. The Xbox also looks a lot like a PC from the *software's* point of view: Game developers can program it in a high-level

language using the same Windows and DirectX APIs they already know from PC game development. If everything goes as planned, game developers will find the Xbox a dream come true when it launches next fall—a system that's as easy in terms of development as a PC, but that offers a console's consistent graphical power and vastly larger potential market. It's tough to fault Bungie for loving what the Xbox offers (although most of us have managed to lay blame quite nicely).—IS

Xbox Features

- Pentium III processor (speed not yet announced)
- Custom 3D NVIDIA graphics processor
- 64MB of RAM
- Custom audio processor
- 8GB hard drive
- 4X DVD drive (for movie playback)
- Four game controller ports
- Expansion port
- Proprietary A/V connector
- 100-Mbps Ethernet

Charla predicts that the PC game market will survive, but will become increasingly polarized, with developers concentrating only on mega-blockbusters and inexpensive family titles (sound familiar?).

In addition to sheer numbers, some technological issues are beginning to work in favor of consoles. Along with offering high-speed Internet options, the next generation of consoles is expected to catch up to the PC in terms of graphics and processing power. And in the case of the Xbox, because the console is based on traditional PC architecture, developers will use familiar tools for building games rather than having to work in the obscure assembly languages console games currently require. Both of these issues are key factors Bungie cites for its decision to go with Microsoft. Consoles also rarely crash and don't require game makers to support a range of third-party hardware.

Of course, a mass exodus from the PC market doesn't bode well for the Mac. Since most Mac games come from the PC market, the number of Mac releases will shrink as

fewer games come out for PC. Additionally, as the PC market veers toward increasingly impressive technical feats to sell games, the cost of porting and supporting games for the Mac will rise, further discouraging developers from turning to the platform (cost of support was one reason Sierra cancelled Half-Life). The fact that the Mac game market itself is not growing will intensify these problems. According to Aspyr's vice president of marketing, Jeff Baietto, though Apple has sold millions of new machines, the market for Mac games has remained flat.

Peter Tampte, former MacSoft executive director (and Bungie's current executive vice president of publishing), puts forth one ray of hope: OS X will offer a richer platform for game development and give the Mac a boost. Id's John Carmack is a poster boy for this theory, but according to Charla, he stands alone. No other developers have publicly paid OS X much attention.

Computer gaming does still offer advantages over playing on a console. Bungie cofounder and lead programmer Jason

Jones acknowledges that people don't set up their consoles as game servers, nor do people make third-party maps for console games. Then there is the keyboard-and-mouse issue—although the next generation of consoles will offer keyboard options, Jones feels most people still won't want to sit back on a couch playing games this way. It's uncertain, however, if these issues are compelling enough to retain loyalty for the computer as a gaming platform—Bungie didn't find them sufficient reason.

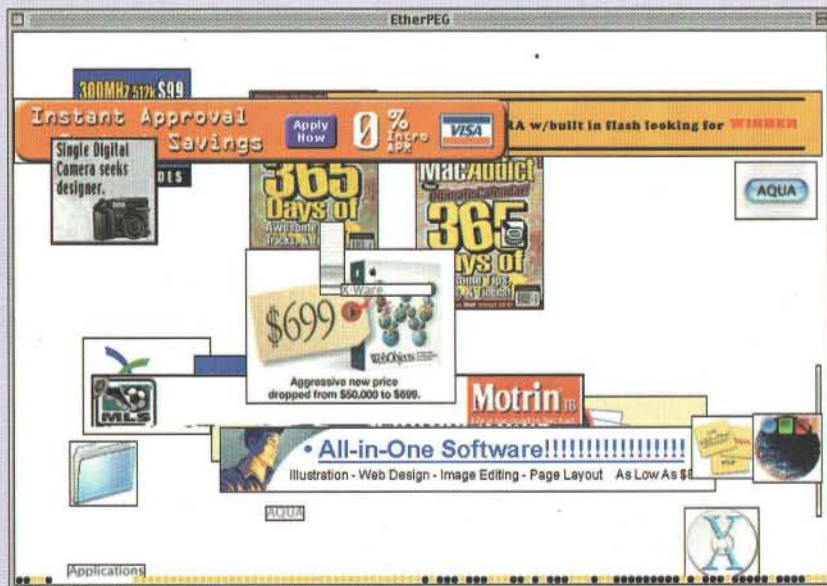
As for Bungie's upcoming titles, as part of the Microsoft deal Take2 Interactive will publish Oni for the Mac, PC, and PlayStation2 (Take2, which previously owned around 20 percent of Bungie, will also get the rights to the Myth name and franchise). Bungie's more anticipated title, Halo, has a less certain future—Bungie says it has not yet decided for which platforms to publish the game. Bungie is also not sure which platforms it will develop for an unannounced third game. You can bet that the Mac is not high on the list.—RC

MacHack 2000

Three-Day Geekfest Produces Another Pile of Cool Hacks

In a summer ritual that has endured for the entire 18-year history of the Macintosh platform, developers gathered at Dearborn, Michigan, in late June to demonstrate their technical prowess at the annual MacHack conference. In a three-night orgy of coding, caffeine, and sleep deprivation, developers did their best to increase the level of weirdness on the Macintosh platform.

A series of firsts marked the Best Hack awards. For the first time, a team repeated its win in the Best Hack category—Miro Jurassic and Alexandra Ellwood, authors of 1998's winning asciiMac hack, won again this year with DockStrip. DockStrip magnifies the Control Strip modules directly under the mouse in the same manner that OS X icons in the dock magnify. In another first, a "yoot" (youth) hack received a separate award this year: Mark Johns and Justin Lee won the Best Yoot Hack award for their Doggie-Style Windows extension. Based on a discussion of canine territorial disputes in Eric Raymond's keynote address, Doggie-Style Windows makes all background windows "run away" from the foreground "alpha" window until they don't overlap (or at least until they overlap as little as possible) with the foreground window. The windows bark as they run, so this hack isn't necessarily great for crowded offices, but it's fun to watch.



THIS ETHERPEG HACK grabs GIF and JPEG images right off an unencrypted AirPort network. Turn on encryption already!

A number of other hacks won lesser prizes. A team from Apple Computer (Peter Bierman, Sam Bushell, and Stuart Cheshire) created EtherPEG (<http://www.etherpeg.org>) to grab images from unencrypted AirPort networks. Drew Thaler, Ed Wynne, Darrin Cardani, and Keith Stattenfield collaborated to build Vertigo, which adds 3D (using the

usual colored glasses) to menus and folders. Monitor Doubler by Eric Traut doubles the size of the pixels, while Los Alamos Security by Jonathan Gary moves folders so that your Mac appears to lose them; the hack actually moves them so that they sit behind the icon for a folder labeled Copy Machine.—JS

Shareware Pick of the Month



FIND
A-DOCK 2.0.1
on The Disc.

A-Dock

Price: \$7 url: <http://jerome.foucher.free.fr/ADock.html>

Some of you may be sick of hearing about Mac OS X, but we're going to ignore your pain. It's all for a good cause—a great piece of shareware, actually. A-Dock by Jérôme Foucher takes a Mac OS X concept—the Dock—and puts it on your Mac OS 8.5, 8.6, or 9.0 desktop. A-Dock works a bit like the Mac OS Application Switcher by displaying a line of icons for running applications—you can switch between applications by clicking

the icon of the app you want to use (or by using a key combination that you can set). The program goes beyond that, though—you can store icons in the A-Dock for applications that aren't currently running but that you want to keep at hand. The A-Dock also maintains a space for the Trash and Desktop, and you can customize it easily. There's a lot more to this application—you should check it out.—DR

FAVORITES: Add favorite applications to the A-Dock—their icons appear here whether or not they're running.

THE THUMB: Lets you reveal or hide A-Dock and grab the window to drag it to a new location.

TRASH: Works like the Trash icon on the Desktop. A Control-click command brings up a menu that lets you empty the Trash from the A-Dock.



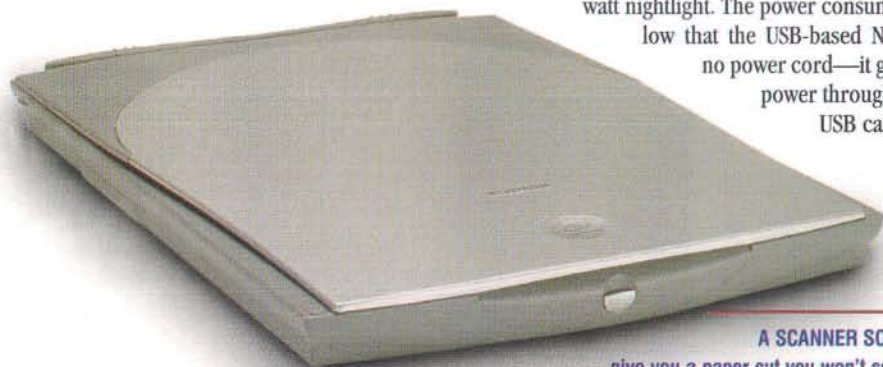
RUNNING APPLICATIONS: All open applications appear here. The three dots below the icon indicate that the application is currently running.

DESKTOP: Hides all other running applications and reveals the desktop.

droolworthy CanoScan N1220U

Canon <http://www.ccsi.canon.com> \$199

Some say health conscious while others say unhealthy body image. Whatever the label, thin is in, and the new CanoScan N1220U is about as in as you can get without going out again. This color image scanner weighs a scant 3.3 lbs, measures 10.1 by 14.7 by 1.3 inches (that's right: just over an inch thick!), and it boasts an optical resolution of 1200 by 2400 dpi (which goes to 9600 by 9600 dpi through some software interpolation voodoo). The N1220U has a low price (\$199) and low power consumption (2.5 watts), about the same as a low-watt nightlight. The power consumption is so low that the USB-based N1220U has no power cord—it gets all of its power through the single USB cable.—DR



A SCANNER SO THIN, it'll give you a paper cut you won't soon forget.

PHOTOGRAPH BY AARON LAUER

Scripter's Corner

Bouncing Icons

With AppleScripts now turning up everywhere from OS X to Photoshop to those strange dreams you keep having that your therapist just can't seem to figure out, they seemed worthy of a bit more coverage than an occasional how-to. We'll begin showing off the stranger side of scripting here on a monthly basis. To get started, we decided to take advantage of the remarkable amount of scriptability the Finder has developed since the release of System 7.5 five years ago. Using AppleScripts, you can modify just about everything from the positions of the items to the selection color. Because AppleScript has a tortured syntax only a language designer could love, these abilities often go unused.

To get you started with your Finder fiddling, here's a cute script that can make an icon bounce like a Super Ball. Create an untitled folder in your frontmost window, rename it Ball, and put it near the upper left corner of the window. Switch to the script editor, run the script, and watch the bouncing ball!—JS



FIND THIS
SCRIPT, BOING!
on The Disc.

```

tell application "Finder"
    -- move to the right by one each step
    copy 1 to xvel
    -- start with a downward speed of one pixel per step
    copy 1 to yvel
    -- we'll set gravity to one pixel per step per step
    copy 1 to g
    -- this will save us some typing
    copy the item "Ball" of the first window to ball
    -- curpos is of the form (x,y)
    copy the position of the ball to curpos
    -- this reads out the x position
    copy item 1 of curpos to xpos
    -- and the y position
    copy item 2 of curpos to ypos
    -- bouncing is cute, but not forever
    repeat 500 times
        -- These two lines move the ball at its current speed
        copy xpos + xvel to xpos
        copy ypos + yvel to ypos
        -- here we update the ball's position
        set the position of the ball to (xpos, ypos)
        if ypos > 150 and yvel > 0 then
            -- this keeps us from falling "through" the ground
            copy 150 to ypos
            -- the 0.95 makes the ball bounce lower each time
            copy -yvel * 0.95 to yvel
        end if
        -- these next two keep the ball in a 250 pixel range
        if xpos > 250 and xvel > 0 then
            copy -xvel to xvel
        end if
        if xpos < 0 and xvel < 0 then
            copy -xvel to xvel
        end if
        -- this adds gravity to the fall
        copy yvel + g to yvel
    end repeat
end tell
    
```

JUST MAKE A FOLDER NAMED Ball in the frontmost window and run this script!

So What Can \$200 Get You?

It All Depends on Who You Are

Say you found two Ben Franklins on the sidewalk (that's \$200, folks). What would you buy for your Mac? A few years ago, some mice and one of those UV monitor screens, maybe, but now you have options. What you'd buy depends on who you are, and we've taken the liberty to choose a \$200 basket of products for a select few stereotypes (tax and shipping not included).—NR

The PDA-ophile: \$199.89

Palm IIIe: \$149

(<http://www.palm.com>)

Premiere slim leather case: \$39.95

(<http://www.palm.com>)

Jesse Ventura's "I Ain't Got Time to Bleed"

eBook, \$6.99

(<http://www.peanutpress.com>)

Venti Caramel Frappuccino: \$3.95

(<http://www.starbucks.com>)



The Napster hipster: \$191.71

JazPiper portable MP3 player: \$149.95

(<http://www.jazpiper.com>)

16MB SmartMedia card: \$41.76

(<http://www.memorex.com>)

Actual music: free

(<http://www.napster.com>)



Le pseudo-artiste: \$196.55

Graphire drawing tablet and pen: \$99.95

(<http://www.wacom.com>)

Photoshop LE: \$95.00

(<http://www.adobe.com>)

Double espresso straight up: \$1.60



The SOHO CEO: \$197.15

ScanMaker 3600: \$89.99

(<http://www.microtek.com>)

Epson Stylus Color 670: \$89.00

(<http://www.epson.com>)

The New, New Thing

by Michael Lewis: \$18.16

(<http://www.amazon.com>)



The paparazzo: \$184.95

Photo easy digital camera (hardly the best, but one of the cheapest): \$149.95

(<http://www.ixla.com>)

GraphicConverter: \$35.00

(<http://www.lemkesoft.com>)



The fashion victim: \$198.94

Tangerine GrabPac carrying

case for iMac: \$30.00

(<http://www.grabpac.com>)

Grape Apollo Speakers: \$39.99

(<http://www.pelestore.com>)

Strawberry Flavor Saver DV security cable: \$29.95

(<http://www.secure-it.com>)

Harman Kardon iSub: \$99.00

(<http://www.apple.com>)



In the Tool Chest

Screen Savers

While phosphor burn-in is an ugly thing, between modern monitors and the Energy Saver control panel it's almost entirely a thing of the past. So why get a screen saver? Some give you a way to show off the prowess of your favorite graphics card, while others let you quickly lock your work away from prying eyes. Fortunately, thanks to the efforts of the fanatically active Macintosh shareware industry, you've got a lot of screen savers to choose from!—JS



FIND ALL THESE screen savers on The Disc.

The Screen saver	The Price	The Author	Comment
BlackWatch 1.5.3	Freeware	Ken McLeod (http://www.penumbra.apple.com/blackwatch)	Simple, unpretentious. Not as pretty as the others, but it does its job well and it's free.
Darkside 5.0.6	\$20	Tom Dowdy (http://www.poubelle.com)	Getting a bit dated, but provides a wide range of screen savers that includes some classics like Kitten.
Eclipse 3.1.1	\$15	Ambrosia Software (http://www.ambrosiasw.com)	Simplistic screen saver lets you cycle through images. Less impressive than the freeware MaxScreen saver.
MacDim	Freeware (most modules are \$5 shareware)	Ibrium HB (http://www.ibrium.se)	Slick control panel with some very different modules. AfterDark compatibility modules available for \$5 shareware.
MaxScreen saver	Freeware	Jesse Bole (http://www.andrew.cmu.edu/~bole/maxss.html)	Easily the best freeware option—provides a whole bunch of modules ported from UNIX screen savers.
Setting Sun	\$20	Purple Shark Software (http://www.webthing.net/setting_sun)	If you want to show off your 3D card's prowess, Setting Sun is for you—it provides a beautiful set of 3D screen savers. Setting Sun is our favorite—it's clean, efficient, and elegant.

QuickDraw 3D Rises from the Dead

It's Back and on OS X

When Apple killed QuickDraw 3D in favor of OpenGL in January 1999, the move horrified a small group of developers. While OpenGL was the clear choice of game developers, it lacked the higher-level features that made QuickDraw 3D modeling programs a joy to write. These developers didn't follow the usual pattern of shrieking incoherently before moving on to other projects—they dusted themselves off and rewrote the high-level parts of QuickDraw 3D to sit atop OpenGL. The new project, "Quesa," is now nearing completion, giving Mac 3D a boost.

Quesa (<http://www.quesa.org>) is an open source project, protected by the LGPL (Lesser General Public License), which forces Quesa's source code to remain available, but allows closed-source commercial projects to use Quesa. When we spoke to Kevin Matthews, Quesa's project coordinator, he described Quesa as "90 percent done—86 percent of the function calls, but some of those no one uses." Because Quesa sits atop OpenGL, it's easily portable—versions of Quesa run on Mac OS, Mac OS X, Linux, and (sigh) Windows NT.—JS

They're Everywhere

The Hottest Hollywood Star Is Not Charlize Theron These Days...It's the Mac

Unless you've been living in a cave, you must have noticed that iMacs, iBooks, and everything else Apple have been popping up in the movies and on TV like gophers on a golf course. If it's not the strawberry iMac on *Ally McBeal*, then it's the tangerine iBook on *Just Shoot Me* or the Apple Cinema Display on *Once and Again*. Apple products also made appearances in the recent films

Black and White, *Return to Me*, and *Scream 3*. So what makes Apple products hotter than capri pants these days?

Beth Tracy, who does product placement for MTWW/Savitt in Seattle, attributes it to a whole lotta marketing. Getting products placed on TV and in the movies is a lot of work—and the two media require completely separate processes. Film studios, in an effort to cut costs, usually require a fee for product placement. The price depends on what kind of exposure the product gets and for how long, as well as how positive the exposure is. For instance, if the iBook saves the world in a James Bond film, the price might be higher than if it *destroys* the world. Tracy says that in Apple's case a studio may also use the equipment to do work on the set, and so most likely would require less in terms of payment.

In the case of TV, FCC regulations prohibit companies from paying for product placement because the FCC considers that paid advertising. That means it's more of a handshake deal. Companies usually contact

product placement specialists at the various television studios and offer to send a slew of their wares in hopes that a show will use them—but no money ever changes hands.

Because of FCC regulations and how courts have interpreted them, networks like ABC black out all corporate logos. But in Apple's case, says Tracy, that doesn't really matter: "[Apple products] are as easily recognized as a Coke can, where you don't even need to see the word Coke. If someone sees that white swish on the red background, they automatically know that someone is drinking a Coke because the branding has been so defined over the years. And that's what you're getting with Apple."—CL



© ABC, PHOTOGRAPH BY RICHARD CARTWRIGHT

YEP—THAT'S AN APPLE studio display.

OS X Shareware Waiting in the Wings

Shareware Developers Gearing Up for X

The early looks at Aqua that we got at Macworld Expo in January and again at Worldwide Developer's Conference in May have caused a certain malaise in the Macintosh community. After all, 16 years of development have refined most of the Mac OS to a fairly impressive state (with exceptions—whose idea was it to put the AppleShare Client in the Chooser, anyway?), while Aqua is an entirely new interface with rough edges that await polishing. Many of the coming improvements will probably start with the same folks responsible for most of System 7's user interface scrubbing—the shareware community. We did some looking, and found many shareware authors already hard at work on Mac OS X goodies.

Sig Software's Gideon Greenspan (<http://www.sigsoftware.com>) was one of the first out of the gate with Classic Menu, a \$10 shareware utility that adds Apple and Application menus to OS X, making it behave a bit more like what we're accustomed to. Sig Software's now hard at work porting Drop-

Drawers, which lets you put pop-out drawers on either side of the screen.

Other folks aren't far behind. James Thomson's busily carbonizing his DragThing application dock (<http://www.dragthing.com>), while Dair Grant is working hard to get his Setting Sun screen saver working. Ambrosia Software is planning a fancy new version of Snapz Pro that should offer the ability to browse through screen shots as well as take them.

Those unhappy with the overall look and feel of Aqua are probably already wondering about Kaleidoscope author Greg Landweber's plans—after all, Kaleidoscope revolutionized Mac OS interface hacking (<http://www.kaleidoscope.net>). While he's looking into porting Kaleidoscope, he warns it'll be a "huge undertaking," as OS X is entirely unlike the current Mac OS at the low levels Kaleidoscope uses. For the moment, he's focusing his efforts on Greg's Browser, a replacement for OS X's Finder.—JS

techinfotidbit

Good Support for Old Products

Clarix Products—After Apple restructured Clarix to create FileMaker, Clarix's products scattered to the four winds. Apple recently posted some information describing the future of Clarix products online.

- **ClarixDraw**—The last version of Clarix Draw is 1.0v4, and that's it. No more versions, no support.
- **Clarix Mailer**—The last version of this killer email app is 2.0v3, and only the updater is available—the original app isn't. A great place to get some utilities and information (but not support) for all you Mailer fans is Fog City Software, at <http://www.fogcity.com>.
- **Clarix Organizer**—Sold to Palm Computing, Clarix Organizer lives on as a free download from the Palm Web site at <http://www.palm.com/support/macintosh>.
- **ClarixWorks**—Renamed AppleWorks—you'll need to contact Apple for support. There's a great Web page at <http://www.info.apple.com/info.apple.com/support/pages.taf?product=AppleWorks>. The current version as of this writing is AppleWorks 6.0.4.

If you're looking for a wealth of great tidbits like these, visit Apple's Tech Info Library at <http://til.info.apple.com>.—DR



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makework

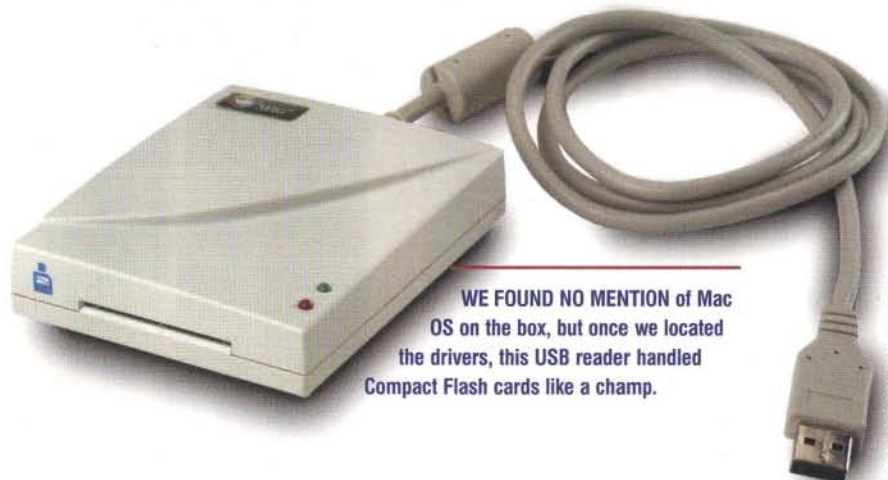


The SIIG USB Compact Flash Reader

The USB and PCI ports in modern Macs a study in frustration. While most PC peripherals now physically plug into the Mac, often that's all they'll do. Without drivers they act just like electronic leeches, draining the Mac's power without performing any useful function. In this new section, we'll try to whip shirking hardware devices into shape. For our first victim, we chose the SIIG (<http://www.siig.com>) USB Smart Media card reader—it's cheap (\$59 street price), simple, and has the potential to make getting images from a digital camera onto the computer far simpler. There's only one problem—nowhere on its box do you find a single mention of the Mac. We bought

the device anyway, in hopes that we could find a way to make it work.

When we first plugged it in, we were discouraged to see the usual "You don't have drivers" dialog box. Still, a quick peek in the Apple System Profiler gave us one last reason for hope. SIIG didn't build the card's internal mechanism—instead, the Apple System Profiler listed the manufacturer as Carry Computer Eng (<http://www.carry.com.tw>), a Taiwanese manufacturer. Moving to its drivers page, we quickly found free Macintosh drivers. Installing them worked beautifully (they used the usual installer package) and gave us a working Smart Media.—IS



WE FOUND NO MENTION of Mac OS on the box, but once we located the drivers, this USB reader handled Compact Flash cards like a champ.

PHOTOGRAPH BY AARON LAUER

The Alpha Channel

In Search of the Missing 8 Bits

If you're mathematically inclined, you may have noticed a mystery in the number of colors you can use. Most graphics programs give you options for 256 colors, which requires 8 bits per pixel; thousands of colors, which requires 16 bits per pixel; and millions of colors, or...24 bits per pixel?

The first two make sense—computers can easily handle groups of 8 bits (called *bytes*), and groups of 16 bits (called *words*). Using 24 bits per pixel, though, is weirder than that guy you dodge every morning on the subway. Computers can't deal with 24 bits at a time very well; the next size they deal with is 32 bits (called a *long word*). If the computer's using 32 bits per pixel, though, what happened to the final 8 bits?

Typically, your system uses that last byte for an extra piece of information called an *alpha channel*. Each pixel contains a number value between 0 and 255, which indicates transparency—0 means the pixel is completely transparent, while 255 means it is completely opaque. QuickTime understands alpha channels, but QuickDraw doesn't (QuickDraw is a primitive graphics environment). In Mac OS X, the more advanced Quartz display system takes full advantage of the alpha channel, and uses it to draw everything from drop shadows to the translucent background of the Dock.—IS

Setting Limits

It's easy to get carried away when you read software packaging that promises more features, more templates, more tutorials—all for a whole lot more money. Manufacturers sometimes repackage

substantially cheaper "limited editions" of their heavy-duty apps, and often these might fulfill all your needs. Check out the examples below.—NR

Limited edition: price	Full version: price	Manufacturer	Key missing features	Buy LE if you're...
Photoshop 5.0 LE: \$95	Photoshop 5.5: \$609	Adobe Systems	Web animation, CMYK color support, advanced color manipulation, History palette, Actions palette, vector path tools	...sprucing up your digital pix.
Canvas 7 Standard Edition: \$99.95	Canvas 7 Professional Edition: \$375	Deneba Systems	Macro Objects palette, Direct Selection tool, style sheets, text wrap, professional output features, less clip art, fewer fonts, recognizes fewer file formats	...outputting your design on an inkjet.
Peak LE 2.1: \$99	Peak 2.1: \$499	berkeley integrated audio software (BIAS)	Support for specialized hardware, cross-fades, DSP effects, gain adjustment, batch file processor, unlimited Premiere plug-ins (LE has limited ones), a lot more	...a hobbyist looking to do entry-level editing.
DeBabelizer LE \$49.95	DeBabelizer 3 \$399.95	Equilibrium	Batch-processing, scripting capabilities, ability to convert still graphic formats to animation and vice versa	...not a professional.

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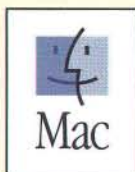
Tri-Media Reader



FireWire Hard Drive



USB/FireWire Combo Drive



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scrapbook

A misty look back at our humble beginnings.

Happy Anniversary

by David Reynolds

Four years ago this issue, *MacAddict* bucked common sense and a sound business plan, and we published our first issue—in the midst

of the troubles afflicting Apple. To celebrate, we take a closer look at our first cover—after drying the tears, of course.

the need for...speed?

That's right—the first 180MHz Mac-compatible system was a Power Computing PowerTower 180 with a whopping 16MB of RAM, a 2GB hard drive, and a 180MHz 604 at its heart. All that power came at a price back then: \$4,195, to be exact.

a huge pain

Judging this contest, in which readers submitted their work in five categories to win one of five professionally painted Macs, involved several days of work in a locked room and a couple of lawsuit threats. We did, however, come up with winners in these areas: graphics, sound, movie, Web page, and desktop design. Let us never speak of it again.

it wasn't a stretch

We went a long way to show why the Mac still had a bright future, and it turns out we were right—it just took a couple of nail-biting years to get there.

the birth of max

Our stick-figure mascot made his cover debut, borrowing a line from a 1986 Timbuk 3 song ("You're gonna need shades!") to make our point that Apple would be back.

a lawsuit waiting to happen

Although we figured the laws allowing certain uses of copyrighted material for news reporting covered us, some of the staffers were just a bit nervous over the use of this stylized 3D Apple logo because they weren't sure how Apple's legal department would perceive it. No problem.

the last big thing

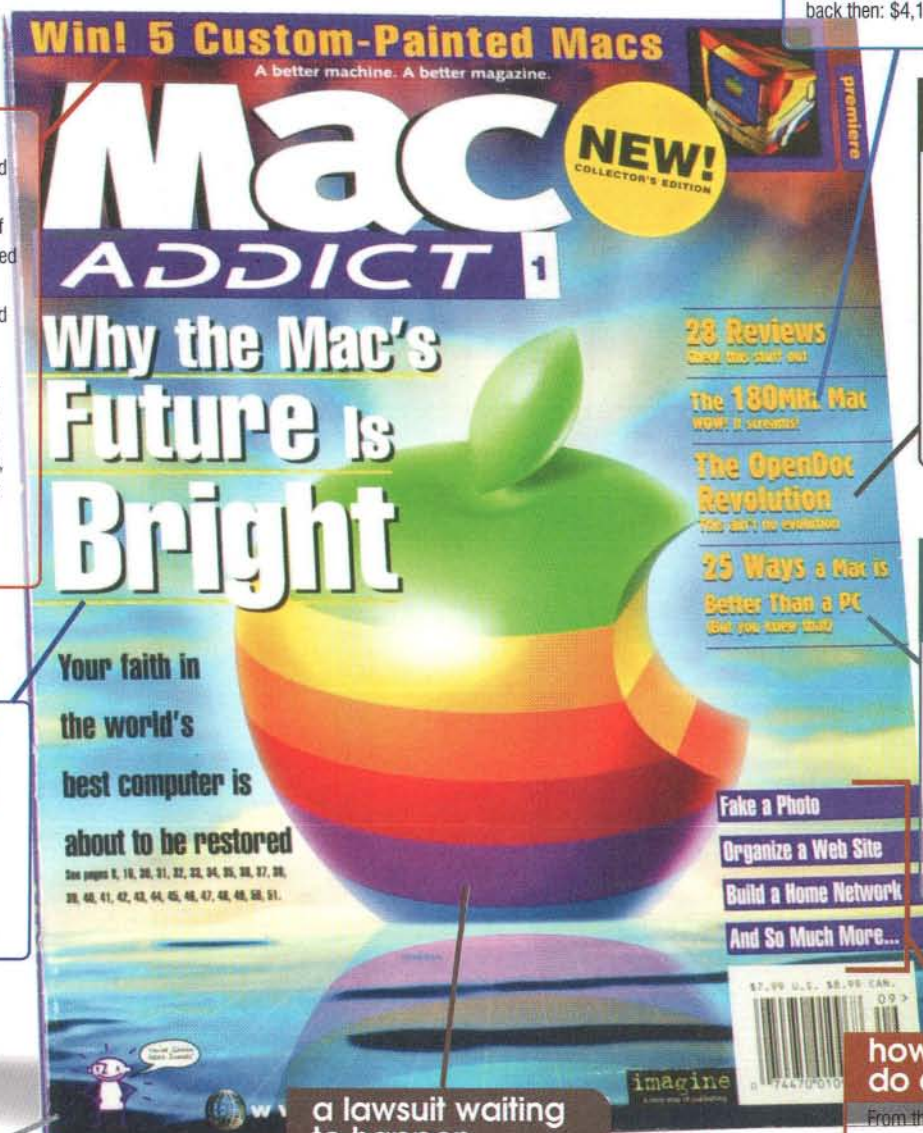
Remember OpenDoc? We do—and it did rock. Too bad it also rolled into an early grave. The technology demos were pretty amazing, though. OpenDoc allowed users to embed such things as live Web pages, running clocks, and spreadsheets in any document.

the start of something obnoxious

We started our list of reasons why the Mac rules with this 25-item treatise by Nikki Echler. Many of the reasons still hold true today, even after the advent of Windows 98, Windows 2000, and the Justice Department's decision.

how to do anything

From the beginning, we wanted to show our readers how to do cool things with their Macs via our *How To* section. In our first issue, we showed readers how to create a fake photo, get started in Web design, and build a home network using LocalTalk.





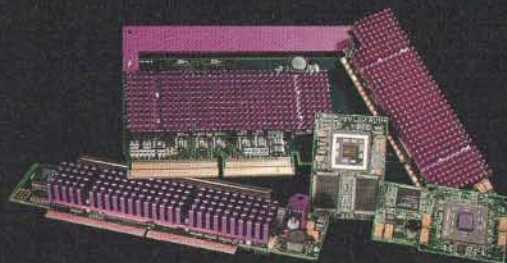
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The NEW FACE OF MAC ADVOCACY

It's not just about survival anymore

by David Reynolds
illustration by Sharon Dahl

A few years ago, desperate times called for desperate measures. Remember the dark days of 1997? You couldn't read the word *Apple* in a news story without seeing it preceded by the word *beleaguered*, and every day felt like a life-or-death struggle as we watched losses mount and market share plummet. Together, Mac enthusiasts reacted by digging in and getting ready to fight the good fight. Every time a misinformed news story about Apple appeared, thousands of us would contact the author to inform him or her of the mistakes. Every time a software company announced that it was dropping Mac support, we would bombard it with reasons why the Mac remained a viable platform.

Things are different now. Steve Jobs and his crew of turnaround wizards came to power and changed everything. Now Apple is posting near-record profits, its unit sales continue to rise, profit margins are meaty, and it's cool to own a Mac again. The computer landscape has changed, too: Microsoft is no longer the unstoppable juggernaut it

once was. With the rise of alternative operating systems (such as Linux and Be), the increasing importance of the platform-agnostic Internet, and the recent Microsoft court rulings, the Redmond behemoth is just not the same bad guy anymore.

That puts a new spin on the question, What is Mac advocacy? Advancing the Macintosh cause has transformed from guerrilla warfare to a social movement, and that means we must change our tactics to match better times. At its core, the goals of Mac advocacy remain the same: to bring new folks to the Mac platform; to make sure we have the best technologies and toys; and to keep Macs in our workplaces, homes, and schools. Though times are better, it's not a given that the Mac will continue to thrive: We need to stay vigilant. *MacAddict* takes a look at what we as Mac users can do to keep our platform robust, as well as what Apple and third-party developers have been doing right—and what more they can do—to ensure that the Mac market stays healthy.



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it means, how to
do it, and why
we should.

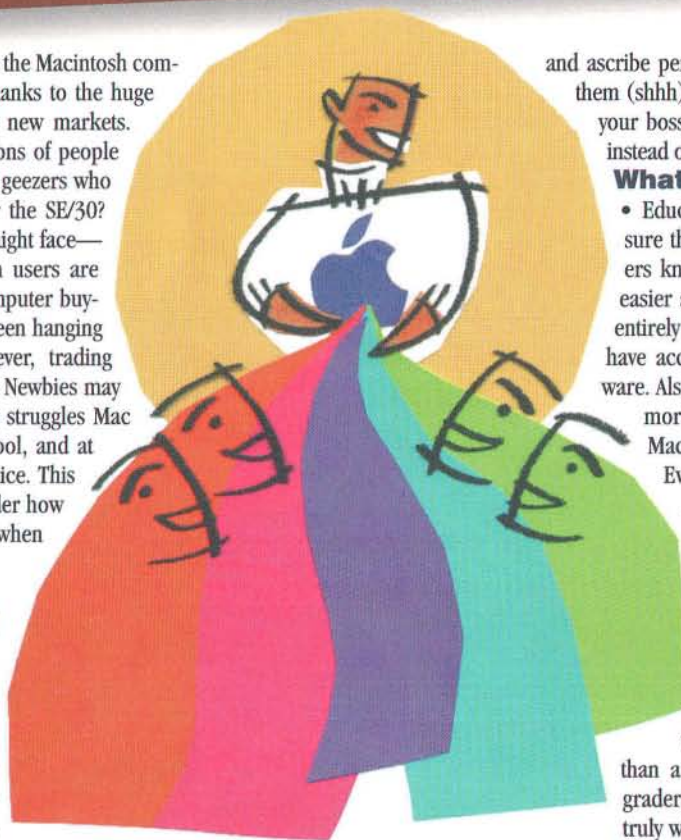
What Mac Users Can Do

The people who compose the Macintosh community are changing, thanks to the huge success of the iMac in new markets.

Sure, Apple can still count on tons of people from the old guard—gurus and geezers who can say things like “Remember the SE/30? Now *that* was a Mac” with a straight face—but more and more, Macintosh users are Wintel converts or first-time computer buyers. These newcomers haven’t been hanging around the Mac universe forever, trading hair-raising PRAM-zapping tales. Newbies may not know—or care—about the struggles Mac users have had at work, at school, and at home over their platform of choice. This means you may need to reconsider how you talk to those around you when you’re advocating the Mac.

Issue 1: Keeping Your Mac

Mac users tend to bond with their computers, and while Wintel users may also feel some kind of perverse attachment, the Mac relationship is usually *positive*. We tend to name our Macs



and ascribe personalities to them; some of us even hug them (shhh). That’s why, when you arrive at work and your boss says you’ll be working on a Pentium III instead of a new G4, you may find it truly upsetting.

What You Can Do About It

- Educate your employer or institution. Make sure those in charge of obtaining new computers know the benefits of having Macs: They’re easier and cheaper to support; they use almost entirely standard components; and they now have access to almost all of the important software. Also point out that you’ll be a much happier, more productive person if you’re using a Mac. For help with education info, join the EvangeList mailing list at <http://www.macevangelist.com> and visit the comp.sys.mac.advocacy Usenet group.

- Turn the tight labor market to your advantage. If you’re adamant about using a Mac at work, consider making that a condition of employment. (We know people who have done this.) Just take great care not to make this a threat—that’ll get you bounced out faster than a Super Ball in a room full of second-graders—and only employ this tactic if you’re truly willing to look for another job.

The Do’s and Don’ts of Advocacy

Part of Mac advocacy is promoting your ideas about which platform is best and why—that means you’ll invariably get into discussions (some might call them arguments). Always remember that the goal of advocacy is to educate without alienating.

Five Solid Advocacy Tactics

1. Be Polite

Please, thank you, you’re welcome—simple bits of polite discourse go a long way when you debate others about your platform of choice.

2. Be Generous

Don’t jump on bad happenings in the Wintel world. A perfect example is the I Love You virus that slammed Wintel users, leaving smoking hard drives in its wake. Copping a snotty attitude about how the worm didn’t hurt Mac users isn’t going to help make your case. Instead, offering sympathy (whether genuine or well acted) dispels defensiveness. Besides, we all know the *real* truth.

3. Pick Your Fights Carefully

If you take on every fight as if it were a hill to die on,

you’ll find that hill sooner than you think, leaving you exhausted when the truly important fights come along. Exercise good judgment before picking up the gauntlet.

4. Check Your Facts

Before you state facts (such as “The Mac is better because it dispenses soft-serve ice cream”), make sure they’re true. Nothing damages your credibility like an outrageous or inflammatory claim. If you do make a mistake, correct it honestly and openly.

5. Give Ground to Get Ground

Conceding some ground is a great way to build good will. In return, you may find that others will come around and embrace certain portions of your point of view. Remember: Unconditional surrender worked only in World War II.

Five Advocacy Tactics to Avoid

1. Don’t Troll for Flames

Don’t troll Usenet groups, mailing lists, bulletin boards, or chat areas for defensive people with whom you can pick a platform fight. While it may

be fun to whip someone into a slaving fury, it’s not constructive.

2. Don’t Attack Indiscriminately

If you must go on the offensive, keep your attack focused. Flailing at anything that moves (figuratively speaking) is just sad, especially when it comes to arguing platform niceties and processor speeds.

3. Don’t Go Beyond the Subject at Hand

Don’t move the discussion from Pentium III versus G4 to how fat someone’s mother is. While it may be funny (or true), it also is not constructive.

4. Don’t Turn Pit Bull

Know when to give up an argument. Pit bulls have locking jaws for a reason—and it’s certainly not to hold on to a discussion that has degenerated well beyond recognition.

5. Don’t Insist on Changing Someone’s Mind

While you want to bring people around to your point of view, you can’t control whether someone actually does start to see things your way. Witness the Flat Earth Society.

• Buy your own Mac. This is a last resort, but if you can't face the thought of using a PC, consider getting permission to buy a Mac with your own scratch for work. Best-case scenario: You'll get a subsidy out of your employer. Worst case: Your employer denies the request altogether.

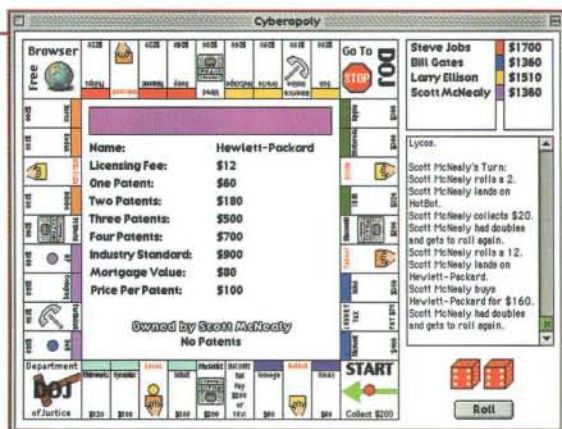
Issue 2: Getting Others to Go Mac

It's an irrefutable axiom: The more people who use the Mac, the healthier the platform. It's in your own best interest to bring others to the Mac, and you'll also do them a favor by converting them to a better machine.

What You Can Do About It

- Make sure potential computer buyers at least *consider* buying a Mac. Sometimes this is half the battle—often once folks start doing research on both Macs and PCs, they'll choose the Mac.
- Emphasize the positive, but don't blow smoke. Feel free to tell tales about how wonderful it is to own a Mac, but don't pretend that bad things don't happen.
- Honor the choice that others make. If your potential converts choose to go Windows, don't berate them. Just let the PC do the talking, and don't give them a sack of "I told you so" when they run into trouble.

BE SURE TO PAY
for shareware
like Cyberopoly
from John
Mauro Software
to ensure the
growth of
Mac shareware.



Issue 3: Keeping the Platform Healthy

Keeping the Mac industry vibrant requires some conscious effort. While Apple bears the brunt of this responsibility, you *can* do some things to make sure the market keeps moving in the right direction.

What You Can Do About It

- Buy lots of Mac products. Of course, you shouldn't buy items you don't need, but it really does help to support companies that make Mac software and hardware. This includes shareware developers, who provide some of the best software on the Mac today and let you test it without making you pony up the cash first. If you use shareware, pay for it. Also, don't pirate software. The more people pay for their Mac programs, the more that will encourage developers to continue working with the platform.
- Ask for Mac products in stores and insist on help when you shop. It's important to show retailers that you as a consumer value Mac knowledge and support. If enough folks go in asking for Mac products and demanding answers, stores will realize that Mac support matters and will give it higher priority.

From Your Lips

We asked MacAddict.com visitors what Mac users can do to better the platform. Here's what they said:

- Quit beating up on Windows users for their platform of choice. —*Kyle DeMilo*
- When you know someone is in the market for a new computer, make sure they research Macintoshes as well as the cheap PCs. —*Chris Reid*
- Support the products released by third-party developers. Don't abuse Hotline and your CD burner to get the latest software or game. —*Chad Lindsay*
- The best thing Mac users can do to improve their platform is code, code, code. —*Michael Travers*
- Start by upgrading whenever possible. —*John Gilmer*

Five PC Toys We Want

Why does the PC world seem to get so many of the cool toys first? Well, it *could* be because it's ten times the size of the Mac market. Here we've listed five cool PC-only gizmos and programs we're drooling over. If you also start drooling, try sending these companies a letter advocating a Mac version. Who knows? Maybe it will actually happen.

1. LEGO MINDSTORMS

LEGOs are the coolest low-tech toy ever, and with the advent of cheap processors and memory, LEGO-based robot kits have made the leap to high tech. Problem is, the interface between the kits and computers is PC only. Boo—especially regarding the cool Droid Developer Kit!

Contact: LEGO Systems, 555 Taylor Rd., P.O. Box 1600, Enfield, CT 06083. Or write to the MINDSTORMS division directly at LEGO MINDSTORMS, 52 Leveroni Ct., Novato, CA 94949.

2. More Games

Although Apple has done a great job of getting choice games to the Mac, many of us want more—like Half Life, Tony Hawk's Pro Skater 2, and Moto-cross Madness, to name a few. Unfortunately, we don't have space to list all of the game company addresses, but if you have a title you *really* want to see on the Mac, check the company's Web site for contact information.

3. Sub-\$1,000 Laptop

While the iBook is killer, its \$1,599 price tag is steep for an entry-level laptop. Adding insult to fiscal injury is the iBook SE, which costs an extra \$200 for a gray paint job (and some minor feature upgrades). PC users can get a laptop (admittedly of slightly inferior specs and quality) for \$999—really scrimp on the specs, and you can get one for \$799.

Contact: Apple Computer, 1 Infinite Loop, Cupertino, CA 95014, or use the company's Web feedback form at <http://www.apple.com/hotnews/feedback.html>.

4. Wearable MP3 Player

It was only a matter of time before some enterprising soul built an MP3 player into a digital watch, and Casio's done it with the WMP-1V (<http://www.casio.com>). Problem is, you need a PC to get your digital music into the watch, even though the interface is USB.

Contact: Casio Computer Company, 570 Mount Pleasant Ave., Dover, NJ 07801

5. Wireless Weather Station

Weather geeks can relate to our desire for Oregon Scientific's WMR-918 Wireless Weather Station (<http://www.oregonscientific.com>). Although the weather station (which can track wind speed and direction, barometric pressure, temperature, and the like) *can* operate without a computer attached, it has the capability to dump this info into a PC, but not a Mac.

Contact: Oregon Scientific, 19861 S.W. 95th Place, Tualatin, OR 97062

• Help get software and hardware ported to the Mac. These days, hardware is easier than ever to make Mac-compatible (thanks to USB), and many companies that produce PC software will often consider a Mac version. If you're interested in bringing those companies over to the Mac, send them a well-reasoned letter in which you explain why you would like to see that software or device on the Mac. Also join a local user group—it's a great way

to get to know your fellow Mac-philes (many of whom also—gasp!—use a PC). You can mobilize these people if need be. While letter-writing campaigns can't do the job alone, a company on the edge may consider them a deciding factor. Witness the petitions to bring Quake II and The Sims to the Mac—in both cases, letter-writing campaigns from ardent Mac users preceded the decision to port the game.

THE OFFICIAL **MacAddict** **Advocacy Quiz**

Are you a force to reckon with or a hindrance to the Mac community? Find out by taking our Mac Advocacy Quiz. Detailed psychosocial analysis has never been this easy—or this fun!

Situation 1: A coworker is buying a home computer. To get him or her to consider a Mac, you:

- A) Engage your coworker in conversation to find out what he or she wants in a computer, and then explain how a Mac can address those needs.
- B) Steal your coworker's credit card and buy a Mac for him or her.
- C) Point out the flaws in every PC ever manufactured, and for good measure throw in the flaws of every person who ever purchased a PC in the past.
- D) Pummel your victim about the head and shoulders with a wet sock full of lime Jell-O.

Answer: A, of course—a classic sales tactic in which you match needs to features. B would only work in the movies, C is just bad form, and D—while some might *enjoy* this practice, it will probably result in a personal injury lawsuit.

Situation 2: A well-known software company announces a killer new application for Windows only, but hints that it might consider creating a Macintosh version. You:

- A) Write a thoughtful email to the appropriate customer service representative at the company and provide reasons why releasing a Mac version would be a good idea.
- B) Take up the issue at your Macintosh user group and in any online communities you frequent and ask that others write emails to the company detailing why a Mac version is a good idea.
- C) Threaten to bomb the company's mail servers with illegally encoded Britney Spears MP3s until it ports the application.
- D) Pummel the company's board of directors about the head and shoulders with a wet sock full of lime Jell-O.

Answer: Both A and B are effective ways to go. A 1999 amendment to the Geneva Convention prohibits C, and while D might look good in a Jackie Chan film, it will most certainly get you arrested.

Situation 3: Your sister-in-law sends you an email screed about how Apple is on its deathbed and then casts aspersions on the lineage of all Mac users. You:

- A) Ask her how your brother is doing.
- B) Remind her that she married the blood relative of a Mac user and by making those comments, she has opened herself up to a blood feud.
- C) Reply to the email with carbon copies to everyone on your Mac user group mailing list, detailing why Apple will stay strong, how Macs surpass PCs, and in what church your parents got married.
- D) Pummel your sister-in-law about the head and shoulders with a wet sock full of lime Jell-O.

Answer: A is the way to go. B is only for Klingons and Vikings, you dork. C still won't change her mind, plus you've just dragged several strangers into a private discussion. Leave option D open if you just can't stand the thought of family harmony.

What Apple Can Do

Over the last three years, Apple has done a spectacular job of turning the Mac platform around by picking the right partners, placing its products carefully, and getting the cream of the crop in software ported to the Mac. The challenge comes in keeping the Mac on the upside, because the forces that whupped on Apple back in the mid 1990s are still out there—as soon as Apple has a bad quarter, we'll start seeing more reports on Apple's doom, yadda yadda yadda. It's nothing we haven't heard before and nothing Apple hasn't weathered before—but to forestall this, Apple must address a few issues.

TAKING YOURSELF TOO SERIOUSLY WARNING

Although we have definite opinions about what Apple should do, take our suggestions with a large grain of salt—we considered bundling one with the CD.



Issue 1: Falling Behind the Latest PC Technologies

While a 500MHz G4 is a beautiful thing—and it *can* hold its own versus a 1GHz Athlon or Pentium III when using software that takes advantage of the Velocity Engine—it just *sounds* half as fast. In marketing, that makes a huge difference. It's even more problematic when you look at midrange PCs, which hang out in the 850MHz range. These machines sound as if they can trump the fastest Mac available.

Processor speed isn't the only place where Mac systems lag—the latest crop of Wintel iron generally has 4X AGP slots for graphics cards and 133MHz system buses. Apple sticks high-end Macs (barring any last-minute announcements that occurred after press time) with 2X AGP slots and 100MHz system buses.

While the actual speed difference between Macs and PCs is small (and very difficult to measure), the perception that PCs are faster is growing

Five Smart Moves Apple Can Make

Apple has done a great job of giving consumers what they want the past few years—but that doesn't mean it can't do more. Here are five moves we think Apple should make.

1. Open the AGP Slot

By giving you the option to choose what graphics card you have installed in the AGP slot when you buy a new Mac, Apple will bring more competition to the Mac market and give buyers more choice. Don't get us wrong—we think that ATI makes a killer graphics card—but there are other great graphics cards out there, like 3dfx's Voodoo 3 and the upcoming Voodoo 5 series. If Apple goes this route, though, it needs to make sure all graphics cards meet minimum standards—for example, they should support DVD and digital monitors.

2. Release Multiprocessing G4s

Yeah, this one's a no-brainer, but we still need to say it. With the advent of Mac OS X and its multiprocessing capabilities, Apple could offer an amazingly powerful Mac based on two or more G4 processors, and it needn't cost an arm and a leg. While we're on the topic of redesigning hardware, why not include a couple more PCI slots for high-end folks?

3. Build a Killer Server

With the power of Mac OS X, a couple of fast Ethernet cards, and a copy of the now-cheap WebObjects software, a Power Mac G4 can make some serious server iron. Apple should build one.

4. Go Back to a Reasonable Mouse and Keyboard

It should be clear to Apple by now that most people find the keyboard and mouse that ship with the current crop of G4s and iMacs inadequate.

Although Apple has done some work on the mouse to solve its orientation problems, it's still an undersize hockey puck—why not give us a two-button mouse like the ones that ship with PCs? And don't even get us *started* on the keyboard. It's time for a redesigned mouse and a full-size keyboard, complete with a full complement of function keys and navigation keys—especially a freakin' forward-delete key.

5. Include an iMac Upgrade Slot

Yes, the iMac is a great machine, but it could be so much more if it had a simple slot for hardware upgrades. The original iMac series had the undocumented Mezzanine slot, for which a few enterprising companies made SCSI and video card upgrades, but current iMacs don't offer any such option.

every day. That makes high-end Macs a tougher sell, especially on the heels of Apple's we're-faster-than-you-are ad campaign. To remedy this, Apple needs to pick key high-end technologies—processor speed, AGP speed, and system bus among them—and deliver the fastest of the fast on new systems.

What You Can Do About It

While you probably won't be going into Apple's design center and tweaking a few resistors on a logic board to provide a 4X AGP slot, you *can* help by keeping tabs on the newest technologies making their way into PCs and understanding which matter and which don't have much meaning in terms of features or performance. Armed with this knowledge, you can better defend the Mac against would-be detractors. Visit Slashdot (<http://www.slashdot.org>) or Ars Technica (<http://www.arstechnica.com>) for a good (and sometimes Mac-related) assortment of tech geek news and information. If you're determined to squeeze every bit of performance out of your Mac, visit Accelerate Your Mac at <http://www.xlr8yourmac.com>.

SLASHDOT.COM IS A GREAT place to start to get the skinny on what all those PC specs really mean.

Issue 2: Market Share Squeeze

Because Macs compose a small percentage of market share in certain areas (such as business, science and technology, and the server market), they often face the danger of removal, a bow to the pressure of homogenization. With its latest round of hardware and the pending release of Mac OS X, Apple occupies a better position to bolster its presence in those areas than it has in years. By savvy marketing to Mac-friendly (or at least agnostic) businesses and universities, Apple stands a good chance of increasing its market share in these areas. The company is already doing this with its science and technology road show, a venture in which Apple is going out to various institutions and touting the wonders of the G4 and Mac OS X (see <http://www.seminars.apple.com/series/scitech2000> for more information). Also, with the arrival of Maya on Mac OS X, the Mac once again becomes a great platform for 3D graphics.

Beyond these specialized markets, Apple can improve its market share by making a stronger push into the retail channel—through its relationship with CompUSA, for example. Although more and more people are buying their computers online, there's still no substitute for walking into a showroom full of knowledgeable sales people and well-maintained demo Macs.

What You Can Do About It

If you work in an area that could benefit from more Macs, lobby respectfully for consideration in new equipment purchases. Provide those in charge with information on Mac hardware and software so they can make informed decisions. Whatever you do, don't alienate these folks, regardless of their decision—or they'll forever go PC out of spite. It's human nature.

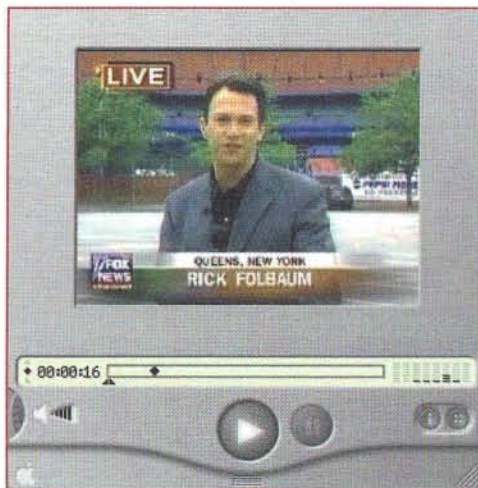
Issue 3: Fast-and-Loose User Interface "Innovations"

We've beaten this dead horse into sausage, but that won't stop us from turning it into pâté. Apple, once the paragon of human interface design, has

begun "experimenting" with its software user interfaces. Sherlock II and the QuickTime Player offer examples of this trend, and not particularly attractive ones. We can charitably describe both as quirky in appearance and behavior. Apple shouldn't make these changes wholesale, and needs to take greater care when altering the look and feel of its software. When in doubt, stick with what works. After all, Apple has more experience with designing human interfaces for software than just about any company out there.

What You Can Do About It

Let Apple know when its interface changes don't make sense to you. Apple has been listening carefully to its customers over the past couple of years, so by voicing your opinion (and encouraging other Mac aficionados to do the same), you can actually affect how Apple addresses future design issues. Although Apple doesn't have an official department in charge of dealing with user interface complaints, you can send a letter to Apple Computer, 1 Infinite Loop, Cupertino, CA 95014, or use the Web-based feedback form at <http://www.apple.com/hotnews/feedback.html>.



AMONG THE BIGGEST atrocities of QuickTime 4 are the difficult-to-use volume control, the unnecessary pause button (which does the same thing as the play button), and the unwieldy favorites drawer.

From Your Lips

Here's what MacAddict.com visitors had to say on the topic of what Apple could do to improve its image in the larger world:

- Get some serious support for real corporate apps such as Microsoft's Outlook and Access.—*Scott Boettcher*
- Work with Motorola and IBM to raise the clock speed of the PowerPC line to parity with the current x86 offerings. As Mac users, we know sheer clock speed isn't that important, but the vast majority of consumers believe it is.—*Mark Hayes*
- Court software industry leaders, encouraging them to migrate to Mac OS X where it makes sense.—*Kjell Stenberg*
- Customer service is one area that really needs help.—*Rick Karhu*
- Advertise more.—*Chris Reid*
- Besides advertising more, Apple needs to change its advertising style. The PC community saw the "Tank" commercial as a joke. No one I talked to realized that the government actually classifies the G4 as a weapon.—*Jimmy Greene*
- Move into business and technical fields.—*Samuel Sinclair*
- Lower the prices on its computers.—*Robert Megrongile*
- Bundle the G4s with software. These are expensive machines.—*Rocco Bruno*
- Offer free beer and pizza at Macworld Expo.—*Matthew Silver*

What Third-Party Mac Partners Can Do

Third-party hardware and software developers, the driving force behind the Macintosh, can make—or break—the platform. Since the Internet burst onto the scene, this group has grown to include Web site developers, many of whom create pages that don't work well—or at all—on the Mac.

Issue 1: Uneven Release Schedules

Often, announced Mac versions of hardware and software ship weeks or months later than their PC counterparts—if at all. By adhering to a release schedule that puts the Mac version as close to the PC release as possible, developers will earn the eternal gratitude of Mac enthusiasts.

What You Can Do About It

Reward developers who do right by the Mac, and let those who flake hear about it (politely). Aside from supporting Mac developers by purchasing their products (good numbers are a *huge* motivator), let them know when they've done a nice job with an appropriate thank-you email or letter.

Issue 2: Web Sites That Aren't Mac Compatible

It's not that difficult to make a Web site that works properly regardless of platform—after all, that's what the Web is designed to do. By staying away from platform-specific Java and JavaScript, using cross-platform plug-ins, and not discriminating against users based on platform (as companies like Disney have done in the past), Web designers can make sites truly cross-platform.

What You Can Do About It

Standard consumer advocacy tactics apply here, too. Contact the Web site's administrator with a respectful letter, organize an email campaign, and

keep up the pressure until there's a change—or until you get tired of the whole thing and find a Web site that offers the same services but doesn't impose arbitrary platform restrictions. If you choose the latter course of action, let the offending Web site know about its competitor—sometimes that's a grand way to prompt action.

Issue 3: Incomplete Mac Versions

Companies such as Adobe have fallen into this trap—offering a Mac version of their software that lacks features found in the PC version. The classic example of this is Adobe Acrobat 4.0, in which the Mac version lacked several features the Windows version offered. Adobe later fixed that problem, but not before it cost the company a lot of good will in the Mac community. Even if it slows down product release, developers should concentrate on feature equity.

What You Can Do About It

Again, it comes down to consumer advocacy tactics: letters, mobilizing a critical mass of Mac users, and finding an alternative. Also consider requesting a product that contains some exclusive features for Mac users. Microsoft has done a spectacular job of this. For instance, Internet Explorer 5 includes some nice Mac-first features—like the Scrapbook and the Auction Manager—winning grudging respect from even hard-core Mac enthusiasts.

From Your Lips

Here's what MacAddict.com visitors had to say about what developers can do to improve the Mac platform:

- Produce Macintosh products at the same time as PC products. —Chris Reid
- Support AppleScript with a comprehensible and comprehensive dictionary. —Richard Einhorn
- Work toward open source and cross-platform compatibility. More than anything else, this would take the wind from the sails of the Evil Empire's marketing department. —William Jurgenson



THE AUCTION MANAGER, while useless to those of us who don't partake in online auctions, is a nice Mac-first feature in Internet Explorer 5.

Five Great Mac Boosters

Fortunately for us, the list of great Mac companies is *too* long to include in full, so we chose five software developers to acknowledge.

1. Microsoft

Yeah, it's a little weird to put the Evil Empire at the top of our list, but the Microsoft Macintosh Business Unit (those responsible for Microsoft's Mac software) is arguably the best large Mac developer out there. Great examples of its software include Office 98, Internet Explorer 5, and Outlook Express 5.

2. Adobe

Jokes about Acrobat and Clown aside, Adobe has made tons of quality Mac products, even during the dark days. Mac users know the company best for Photoshop and Illustrator, but Adobe also produces Premiere, GoLive, InDesign, PageMaker, LiveMotion, Acrobat, and After Effects, among others.

3. Aspyr, Bungie, MacSoft

Okay, so that's three companies, but these folks kept us in games when no one else would, giving us such titles as Tomb Raider, Myth, and Unreal.

Let's just hope Bungie can maintain its dedication to the Mac now that Microsoft has acquired it (though we're not holding our breaths).

4. Macromedia

Again, the awesome Mac support and products that come from Macromedia are too great to enumerate, but you may recognize these: FreeHand, Dreamweaver, Fireworks, Flash, and Director.

5. Apple

With the release of Final Cut Pro, iMovie, QuickTime 4, and a cheaper version of WebObjects, Apple has been its own best friend.

David Reynolds will always treasure the time he spent camping behind enemy lines with nothing but a pocket knife, fishing line, and a fear of roaches.

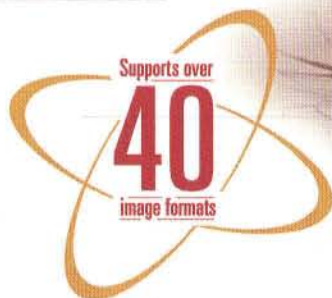
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and a
DAVE 2.5.1
evaluation on
The Disc.



CAN YOU
BEAR to talk
PC? Go to
[http://www.
.macaddict
.com/debate](http://www.macaddict.com/debate).

Let's face it. As much as you've tried to ignore Windows, you just haven't succeeded in making it go away. PC users send files you can't open. Then they complain whenever you email them a file *they* can't open. You know how much better a Mac is, but it's getting annoying to hear PC users snarl, "Oh, you have a Mac," as if you were working with a broken pencil and an abacus.

The truth is, others are less enlightened than you when it comes to operating systems. Worse yet, PCs are starting to pervade more aspects of your life. Perhaps your office is crawling with PCs and you're the lone Mac user, or maybe your wicked boss has even replaced your work machine with a PC. How are you going to hang onto your beloved Mac when everything around you is turning into Windows?

Fortunately, you don't have to go over to the Dark Side completely. With a little knowledge and some cool tools, you can share files, printers, and Internet connections across the two platforms and officially integrate the Mac and Windows worlds.



MOVE IT OR LOSE IT

Sending Email Attachments to PCs

To ensure that a file you send to a PC doesn't arrive as a garbled mess, you have to treat it like a Windows file. That means *encoding* it in a format Windows software can recognize. Email software encodes files as text when it attaches them to a message. The trouble is, Mac email software defaults to a different encoding standard than the one PCs use.

The prime encoder for Windows-targeted attachments is MIME/Base64. In Microsoft Outlook Express 5, the old but popular Claris Eudora, and Qualcomm Eudora, you can encode your attachments directly within each message—just bring up a new message and find the encoding menu. In older versions of Outlook Express, it's a bit more complicated because you have to change the Preferences setting. In the Edit menu, go to Outlook Express and choose Message Composition in the left column. Near the bottom of the window you'll see the Attachment Encoding pop-up menu, where you can select MIME/Base64.

Eudora uses a variant of MIME/Base64 called AppleDouble, which you can select from your encoding menu—this also works with Windows. Just make sure to choose BinHex or AppleSingle when you send attachments to another Mac—otherwise files will lose their icons, as well as their type and creator codes, and Mac apps won't recognize them.

When you're emailing attachments, pay attention to compression as well, since some email software compresses a file before encoding it. Mac software defaults to Stuffit (SIT) compression, a format most PCs won't recognize. One simple solution is to turn off compression in your email software—you'll usually find this option in the same window where you set encoding.

Another option is to compress files in a format Windows understands, such as ZIP. Just download and launch the shareware ZipIt (\$15, <http://www.maczipit.com>) and drag your files to the ZipIt window. Make sure to turn off MacBinary (a type of encoding most PC software does not recognize) in the Preferences settings, then save and name the archive file.

BECAUSE NOTHING IS SIMPLE when it comes to Windows, you must set the encoding to MIME/Base64 in Outlook Express or any email program if you want the PC to recognize your attachment.

LIKE OUTLOOK EXPRESS 5 and Eudora, Claris Eudora lets you set encoding for each message so you don't have to mess around with Preference settings.

Name	Expanded	Zipped	Saved	Method	Date	MB	LF
report1.doc	49 K	6 K	86%	Deflated	1/1/00	0	0
report1.xls	4 K	1002 bytes	76%	Deflated	2/25/00	0	0

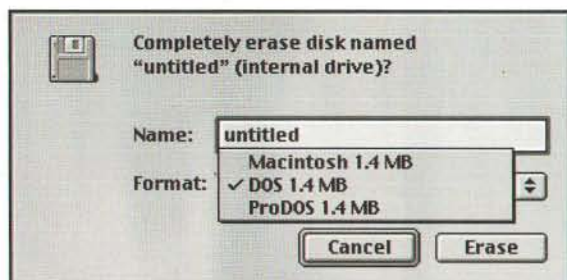
ZIP IT UP—just drag files to the ZipIt window to compress them in a format Windows can understand. Make sure you see grayed-out circles in the MB column—that means MacBinary is turned off.

QMJAYMDYwMzA1MDQwNTAyMDMwNH1UeW1lcyBOZxcgUm9tYW47fX17XGh
 DXGdyZWYwMFxiYHVMdDccmYkMFxncmYlYjBcYmx1ZTI1NTtccmYkMFxncmY
 QMJU101xyZWQwXGdyZWYwMjU1XGJsdWUwOwOKXHUJZDI1NVxncmYlYjBcY
 QMJU1XGdyZWYwMFxiYHVMdDccmYkMjU1XGdyZWYwMjU1XGJsdWUwO1xyZ

SAY WHAT?! A file attachment from a PC user might end up looking like this. Your mission, should you choose to accept it, is to decode that sucker.

DRSVP: 555-523-2246
 ☐
 ☐The enclosed file have complete details of the program, the application, and a photo of myself
 ☐
 ☐Sincerely,
 ☐Rufus T. Firefly
 ☐
 ☐-----IASAF114705205
 ☐Content-Type: application/octet-stream; name="SYAMARL.RTF"
 ☐Content-Disposition: attachment; filename="SYAMARL.RTF"
 ☐Content-Transfer-Encoding: base64

ONE WAY TO DECODE an attachment is to delete the text of the email message preceding the line "Content-Type: application/octet-stream." What remains is the actual encoded file. Save this as text and drop it on Stuffit Expander.



THE PC MAY DISCRIMINATE, but the Mac doesn't. That's why you need to format disks for the PC, not the Mac, if you're planning to use them across platforms.

What's in a Name?

Think of Windows as the equivalent of that rather dim dog of yours that can't quite manage to learn a new trick—you need to spell out exactly what you mean to make it understand you. Therefore, when you're ready to send a file to a PC user, give it a name Windows can recognize. For instance, Word files should end in .doc, Excel files in .xls, and HTML files in .htm. JPEG and TIFF files should end in .jpg and .tif. Use these endings whenever you send a file to Windows users—otherwise the recipients might not be able to open or even see the file on their systems. When naming files headed for a PC, don't use spaces or multiple periods. Also avoid these characters: slashes, angle brackets, square brackets, question marks, equal signs, colons, semicolons, commas, and quotation marks.

Receiving Email Attachments from PCs

A familiar scenario: You receive an email attachment sent from a PC. When you open it, you encounter a giant, gnarly, garbled mess. What's going on? Your email software didn't recognize the type of encoding and couldn't decode the file. Sometimes that happens because the email headers and the message itself get mixed up with the file enclosure.

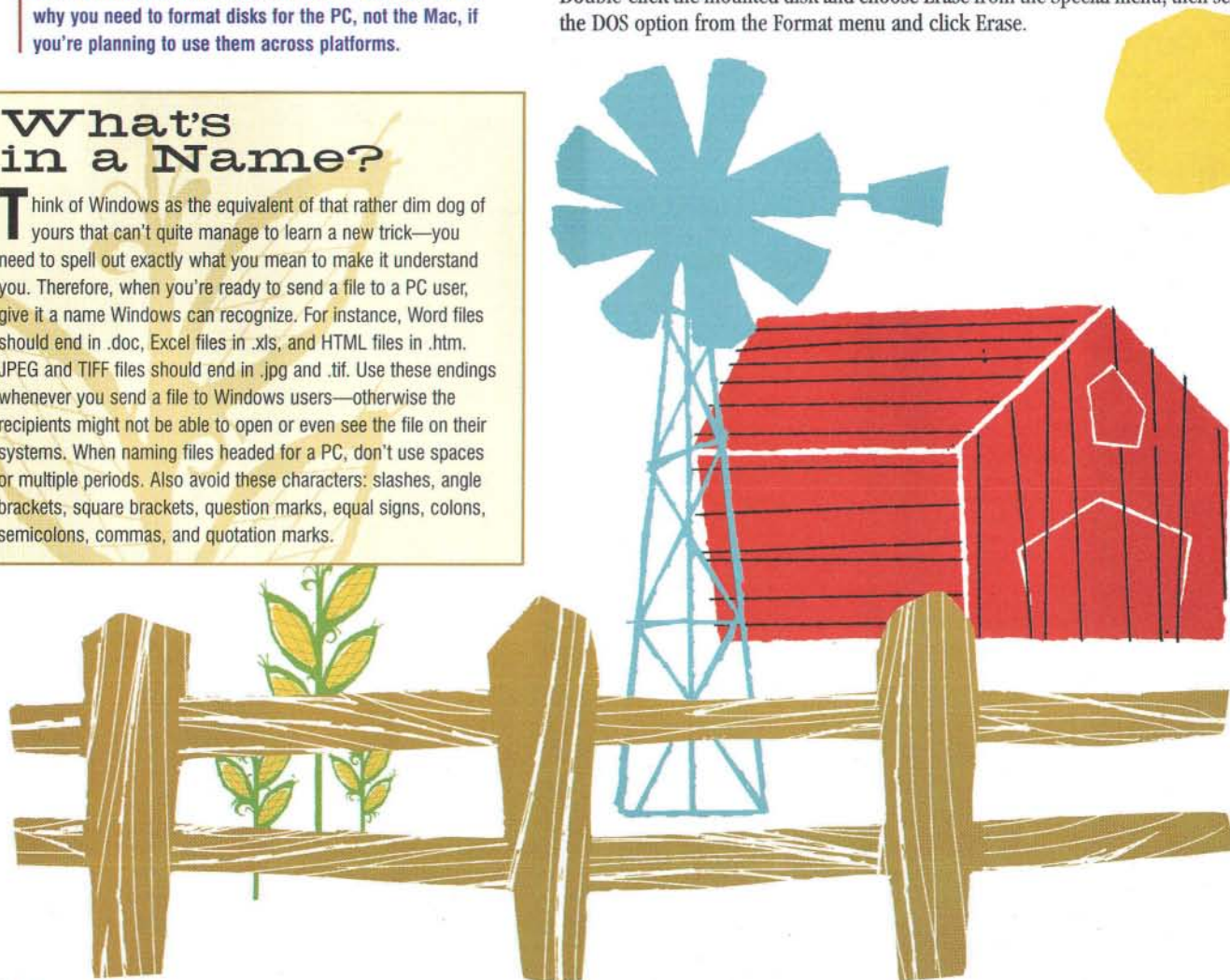
To decode this disaster, you can drag the file on top of Stuffit Expander, which comes with Mac OS, although sometimes that alone won't do the trick. DataViz's MacLinkPlus (\$99.95 SRP, <http://www.dataviz.com>) tends to do a better job of recognizing encoded attachments, stripping out email headers, and decoding files.

If you don't have MacLinkPlus, you can try decoding a text file by doing a little mop-up and then using Stuffit. Open your file with a text editor or any word processor, such as Microsoft Word or AppleWorks. Delete everything above the line "Content-Type: application/octet-stream," which appears if you have a MIME/Base64-encoded file, or "begin 644," which shows up if you have a UUencoded file (another encoding standard for PCs and Unix). Save the document as text (not as a Word or an AppleWorks file). Stuffit Expander should recognize it now.

Sharing Disks

Superior machine that it is, your Mac already knows how to read PC disks. (Just make sure the File Exchange control panel is active. If not, use the Extensions Manager to turn it back on.) The reverse isn't true. Therefore, if you send Zip or floppy disks to PC users, you must use PC-formatted disks. Zip cartridges often come in PC format, but if not, you can reformat them with the Iomega Tools utility. (You'll find this in the Iomega folder that the Zip drive installation placed on your hard disk.)

If you have a Mac with a floppy drive—either a built-in one or an external USB device such as the Imation SuperDisk—you can format a floppy from the Finder. Double-click the mounted disk and choose Erase from the Special menu, then select the DOS option from the Format menu and click Erase.





IT'S IN THE WAY THAT YOU USE IT

Opening Files

Your Mac is capable of opening most PC documents. However, any PC file that ends with an .exe extension is a program of some kind, which means you can't run it unless you have a PC emulator. Mac applications already know how to open some PC documents. For instance, Microsoft Word 98 can open Word for Windows files, and Photoshop can read several PC-format graphics files, including BMP. Your Mac doesn't always recognize these files at first, though, so if you double-click the icon, a dialog box might appear, asking you to pick an application.

The Mac OS will remember what you choose and launch this application the next time you double-click a similar PC file. If you don't want your Mac to do this, open the File Exchange control panel, click the File Translation tab, and select the Always Show Choices When Translating File option. If you pick an inappropriate program, you'll get an error message telling you that application can't open the file.

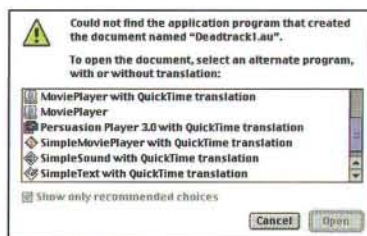
Translating Files

Sometimes your Mac gets totally befuddled and *none* of your applications can read a PC file. Other times you'll want to convert a Mac file to a PC format. Either way, you need a utility such as MacLinkPlus that can translate between formats. MacLinkPlus supports hundreds of Mac and PC word processor, spreadsheet, and database formats. It can also translate a few common Mac and PC graphics formats, such as PICT, GIF, JPEG, TIFF, and PCX.

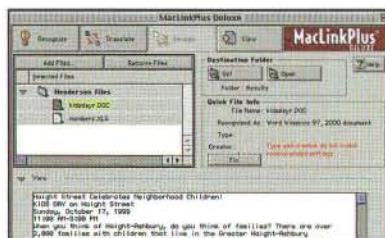
MacLinkPlus is a great go-between for the two platforms because it takes care of issues such as ASCII characters. Basically, Macs and PCs have in common 128 ASCII characters (called the *lower 128*). These include the English alphabet, numbers, and punctuation. The two platforms don't define the *upper 128* the same way—these include different combinations of special characters, umlauts, em dashes, and some types of carriage returns. In a PC file, these characters often show up as boxes when you open it on your Mac. MacLinkPlus fixes these discrepancies.

To translate a file or a folder full of files, drag and drop it on the MacLinkPlus icon or the open MacLinkPlus window. Click the file you want to translate, and MacLinkPlus reports what type it is. When you click the Translate button, a Translation Settings window comes up. Click one of the pop-up menus (Word Processing, Spreadsheet, Database, or Graphics) and select a Mac or PC file format. Click Translate, and MacLinkPlus creates a new file in that format. If all you want to do is look at the file, click the View arrow and MacLinkPlus displays the text or graphic. You can then just copy text from this window into a document. Unfortunately, you can't copy or drag a graphic out of the view window.

For graphics formats MacLinkPlus doesn't support, such as PGN, EPSE, HP-GL/2, PSION, and Sun Rasterfile, use Lemke Software's shareware GraphicConverter (\$35, <http://www.lemkesoft.de>), which can convert dozens of Mac and PC graphics formats. Just open a file in GraphicConverter and select Save As; this brings up a window with a list of the formats in which you can save your file.



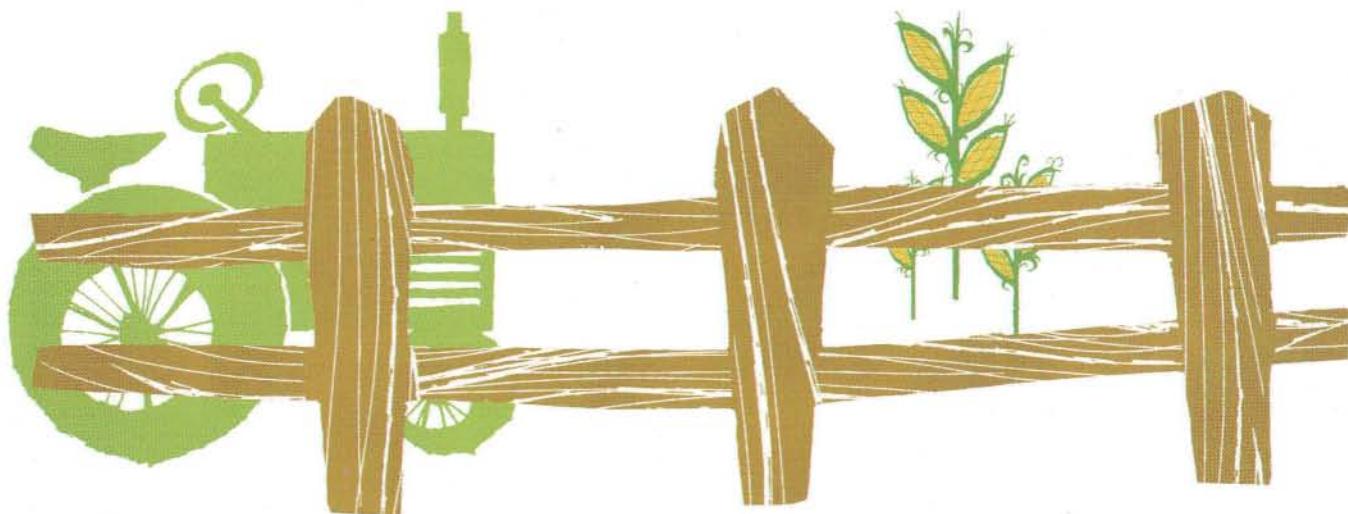
CHOOSE AN APPLICATION
to open a PC file after you double-click it. Here we could select either MoviePlayer or SimpleText with QuickTime translation for our sound file.



MACLINKPLUS TELLS
you what kind of file you have. You can even view a text file without translating it.



SO MANY CHOICES, so little time. You have access to dozens of Mac and PC graphics file formats in the Save As dialog box of GraphicConverter.



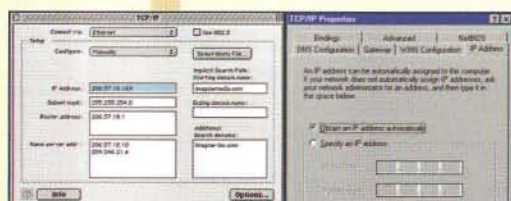
This Is Not Your Father's TCP/IP

The Windows equivalent to the Mac's TCP/IP control panel is called the TCP/IP Properties dialog box, but it might not look too familiar to Mac users. To access it, go to the Start menu and choose Settings, Control Panel. Double-click the Network icon, then double-click TCP/IP-> next to your Ethernet card.

Windows uses some different terms from those you'll find in the Macintosh TCP/IP control panel. See the translation chart below.

If you have OS 8.5 or later and Windows 98 or later, both systems can give themselves IP addresses when you set TCP/IP to DHCP.

Windows Term	Macintosh Term
Specify An IP Address (in the IP Address tab)	Configure Manually (in the Configure pop-up menu)
Obtain An IP Address Automatically (in the IP Address tab)	Configure Using DHCP (in the Configure pop-up menu)
Gateway Router Address	Router Address
DNS Server Search Order (in the DNS Configuration tab)	Name Server Addr.
Domain (in the DNS Configuration tab)	Search Domains (with User Mode set to Basic) or Implicit Search Path: Starting Domain Name (with User Mode set to Advanced or Administrator)



THE WINDOWS TCP/IP settings have different names from their equivalents in the Mac's TCP/IP control panel.

ASSEMBLY REQUIRED

Sharing an Internet Connection

Sharing a single Internet link between a Mac and a PC isn't too different from sharing a connection between two Macs. It also doesn't make much difference whether you have a regular modem connection or a high-speed cable modem or DSL account.

The first thing you need is an Ethernet network, which involves buying an Ethernet adapter card for your PC since most don't have built-in Ethernet ports as Macs do. These gadgets range from \$15 to \$50, and you can buy them from computer and electronics stores, as well as online stores such as Atman USA (<http://www.atman-usa.com>). You'll also need an Ethernet hub for connecting the computers in your network; you can get this from vendors such as Farallon (<http://www.farallon.com>) and Asanté (<http://www.asante.com>). Simply plug all your computers into the hub using Ethernet (10Base-T) cables. If you have a cable modem or DSL modem, plug that into the hub as well.

Now you need an Internet gateway, which enables a network of computers to share a single Internet link. You can use a piece of hardware that plugs into the hub, such as a gateway from Netopia (<http://www.netopia.com>) or even Apple's AirPort. (The latter option works best with PCs on Ethernet—AirPort can create problems if you try to go wireless with your PCs.) Another gateway option is to run software on either a Mac or a PC. Software gateways are cheaper (hardware gateways start at around \$300, while commercial software gateways cost \$29 and up), but you must have the computer that runs your gateway turned on anytime you want to access the Internet.

You have your choice of software gateways, including three good ones from Vicomsoft. For two or three computers, there's Vicomsoft SurfDoubler (\$29 SRP for two computers, \$39 SRP for three; <http://www.vicomsoft.com>). If you have more than three computers, the easily configurable Vicomsoft SoftRouter (\$99 SRP) is a good choice for IP newbies because it contains a DHCP server (software that automatically assigns IP addresses to each computer on the network). The Vicomsoft Internet Gateway (starting at \$149 SRP) comes in several packages depending on the size of your organization. It includes more administration features, such as the ability to monitor and manage the network from another computer; performance enhancements, such as a Web-caching server (which caches Web content to improve network response time); and connection teaming (the ability to team two modem lines to increase bandwidth). The most difficult Internet gateway solutions to set up are shareware packages for Windows, like NetPresenz (\$75, <http://www.stairways.com/peterlewis/netpresenz>) and WinProxy (\$99, <http://www.winproxy.cz>). None of these packages offers SurfDoubler's one-click configuration, and you'll need to know some technical terminology as you fill in the windows.

Setting up the gateway software on a Mac is easier (no surprise there), but you might be better off installing it on a PC, especially if you don't use that machine as much as your Mac. For instance, if you'll be moving big files to and from the Internet all the time, the machine running the gateway may take a performance hit.

Network File Sharing

Once you have a network set up for sharing an Internet connection, you can use it for other tasks, such as moving files, playing multiplayer games, or possibly even sharing a printer.

The bad news is that the built-in file-sharing capabilities of Macs and Windows don't play together, so if you set up a network and turn on file sharing for both machines, they still can't see each other. The good news is you can still share files over a network via one of two methods: the free way and the easy way.

The free method involves turning on Web sharing in the Mac's Web Sharing control panel. In the Web Sharing window, press the Select button to choose a folder or hard drive to share. A dialog box appears, asking you to select a document in the Web folder to use as your home page; select None. To access files on the Mac from your PC, open up your Web browser and type the IP address of the Mac in the URL field—presto! You'll see everything in the shared Mac folder or disk. To allow your Mac to access a PC's files through the Internet, you need to install a similar feature called Web Sharing from the Windows CD-ROM.

One drawback to personal Web sharing is that it doesn't help you share a printer between a Mac and a PC. For that, you'll have to spend a little dough and go the easy way. Install a copy of Miramar Systems' PC MacLAN (\$149, <http://www.miramarsys.com>) on each Windows machine. PC MacLAN installs AppleTalk and AppleShare file and printer sharing on the PC, thus allowing the networked PC to show up in the Mac's Chooser and the Mac to appear on the Windows network.

If you have more PCs than Macs in your office, it makes sense to install Thursby Software Systems' DAVE (\$149, <http://www.thursby.com>) on all your Macs. DAVE is the opposite of PC MacLAN: It installs Microsoft file-sharing protocols on the Macs. To the user, it looks pretty much the same—the PCs show up in the Macintosh Chooser and the Mac shows up on the Windows network. You'll also find DAVE handy for getting a Mac onto an existing corporate or university Windows NT network. Using DAVE, the servers see your Mac as just another PC.

Printer Sharing

Whether you can share a printer between a Mac and PC depends on the printer itself. If you have PC MacLAN installed on your PCs, you can print to non-PostScript PC printers from your Mac. Just add the printer driver software to your Mac—install InfoWave's PowerPrint (\$99 SRP, <http://www.infowave.com>), a package that enables Macs to print to 1,600 PC printer models. If you don't have PC MacLAN, you can use InfoWave's PowerPrint for Networks (\$249 SRP) to tap your Mac into a networked non-PostScript PC printer, though this software doesn't give you file sharing capabilities.

On the Mac printer side, PC MacLAN and DAVE both give PCs access to PostScript Mac laser printers on your network. Unfortunately, PCs can't print to most non-PostScript Mac printers, such as personal LaserWriters and StyleWriters, because they don't have Windows drivers, and no equivalent of PowerPrint exists for the PC.



WHEN YOU SET UP WEB SHARING to let PCs access files on your Mac, don't select a home page.



NO, THIS IS NOT A MISTAKE, and yes, that's a Windows screen in our magazine. We're setting up Mac access to a PC's files in the PC MacLAN Console window.



THE DAVE NetBIOS control panel is where you configure PC networking on a Mac.



LAST RESORT

Don't worry: This is not the section where we tell you to ditch your Mac and buy a PC. At times, however, you may need to use a Windows file from a coworker or your office PC, only to find that no Mac program will open it and no translator can convert it. For instance, you could run into a file created in Intuit's QuickBooks or in Microsoft Access, the database included in Office for Windows but not in the Mac Office suite.

In this case, you have to run both the Windows OS and the PC software. Fortunately, you can do that on your Mac with a PC emulator such as Virtual PC

from Connectix (\$179 SRP, <http://www.connectix.com>) or SoftWindows from FWB Software (\$159.95 SRP, <http://www.fwb.com>). You need a fairly new Mac with lots of RAM to run an emulator. At a minimum, you should have a Mac with a PowerPC 604 processor, but a G3 or G4 processor is much better. Emulation also requires at least 48MB of RAM, though 64MB or more is ideal, and at least 400MB of free hard disk space. An application won't run as fast in an emulator as on a real PC, but it should get the job done. And let's be honest: It's better than having to switch to Windows completely.

John Rizzo writes about integrating PCs and Macs at the MacWindows.com Web site. He is the author of *Macintosh Windows Integration* (Morgan Kaufman Publishers, 1999). You can email him at johnrizzo@macwindows.com.

The 17-Point Mac

MAKE Your MAC CLEANER, FASTER, STABLER,



FIND DEMOS of UpdateAgent 8 and Conflict Catcher 8.0.6, a Suitcase 9 trial, and TechTool 1.2.1 on The Disc.

Some people give their computer no more consideration than they do their doormat—as long as it's there every morning, it never gets a second thought. But just as a neighbor's kid is plotting to decorate your doormat with a flaming bag of dog poop, then ring the bell and run, disaster is poised to strike your Mac. Will you be ready on the step with the water hose, or will you be the one stuck with smelly shoes?

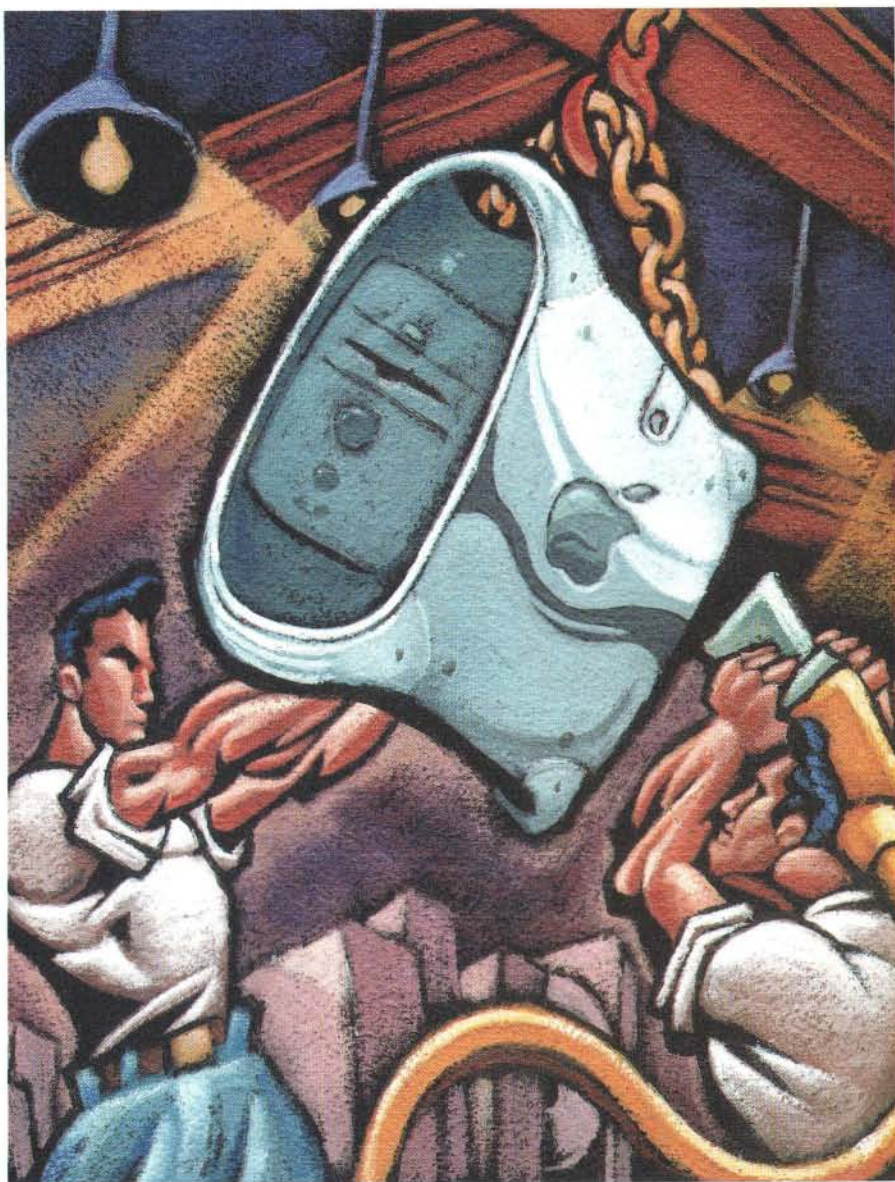
Your Mac needs at least some maintenance to keep running smoothly. Apple doesn't publish a routine maintenance schedule (but it'll sell you an extended warranty if that worries you). The amount of maintenance your Mac requires depends on how you use it. If you keep it in a dry, moderate climate, never install software or hardware, and never browse the Internet, use email, or transfer files, you could probably use it for years without lifting a finger to keep it in shape, and it would still work like a champ. But most people flog their computers, so an ounce of preparation can save a pound of cash.

Here's a simple guide on how to maintain your Mac, including an easy-to-follow 17-point chart (see "Maintenance Intervals," p47). This is not for fixing problems you already have—it's for preventing them. But because we know maintenance probably isn't high on your list of fun Saturday night activities, we've tailored our tips to match your proclivities, so pick a personal profile (you don't have to tell us which one you fit).

Plain Jane: Your desk gets cluttered, but occasionally you neaten it. You want to take good care of your Mac, but sometimes you don't have the time. We understand.

Anal Alan: You have waaay too much time on your hands. Your parents rushed your potty training, right? Here's a quick tip, because we know you're anxious: You *can* buy a peripheral that doesn't color-coordinate with your iMac. Breathe.

Sloppy Joe: You won't buy a new iMac DV because you really do use the CD-ROM tray as a drink holder. Instead of wiping the screen when it gets dirty, you turn up the brightness.



by Alan Stafford

illustration by Robert Rose

***DISCLAIMER:** Our recommended schedule is "Plain Jane." We cannot be held responsible for anything that happens to the true slobs in the bunch.

Maintenance Plan

LONGER-LASTING, and IMMUNE to DISASTER!

Good, Clean Hardware Gets Good, Clean Results

Let's start with the computer itself. You may consider your Mac an appliance, but it's not like a clock radio. It has moving parts inside and out, and its delicate components require care.

For EXTERNAL Use Only

Art Hendrickson, head technician at Small Dog Electronics (<http://www.smalldog.com>), which fixes and resells used Macs, says sunshine causes beige plastic to turn yellow. Also, he adds: "Smoking around a computer is a cause of yellowing, but most of the damage caused by smoking is internal." You probably can't change the fact that you work in a closet-size cubicle (driving you to smoke), but sticking your Mac where the sun don't shine and kicking the habit can help your poor computer look good and last longer. Or stick to translucent Macs and smoke like it's your last day on Earth.

For all Macs, Apple recommends cleaning the external plastic surfaces surrounding the computer, monitor, keyboard, and mouse, as well as the computer screen, with a cloth dampened (not soaked) with water. Water alone may not cut through the grime, however, so you might need a more powerful cleaner. You'll find many cleaning products made for computers—avoid any that contain isopropyl alcohol, ammonia, or abrasives, because they can mar the surface and damage the antiglare coating on your monitor.

While you're at it, wipe down your cables, check them for wear, and make sure they're properly connected (especially SCSI cables, which can cause your computer to crash if they're in bad shape).

RECOMMENDED INTERVAL

Plain Jane: Every month or so.

Anal Alan: Daily.

Sloppy Joe: When your iMac's translucent plastic becomes opaque. Please.

Keyboard CRAP and Mouse Droppings

Use a vacuum to suck out the taco chips and fingernail clippings between keys (first turn off the computer and unplug the keyboard). Alternately, you can use canned air to blow out dust and crumbs, but often that will trap some dirt inside the keyboard. So vacuum first, blow last.

To clean your mouse, unplug it, then remove the retaining ring underneath the mouse and take out the ball. Wash the ball in soap and water, then dry it with a lint-free cloth. Dampen the end of a cotton swab ever so slightly with water, then twirl



A SLIGHTLY DAMP cotton swab is often all you need to clean the rollers inside your mouse.



WATCH OUT FOR THE TEETH! Sometimes, for heavy-duty dirt, the smooth edge of a plastic knife works well to clean the rollers.

it while holding it against the rollers, working your way all around each roller until it's crud-free. Many times, however, that's not enough to get rid of accumulated dirt. In that case, use the smooth edge (not the serrated side) of a plastic knife to gently scrape the rollers clean. Don't use anything sharper or you'll scar the rollers, which will cause dirt to adhere even more easily.

RECOMMENDED INTERVAL

Plain Jane: Every couple of weeks, or whenever your mouse becomes jumpy.

Anal Alan: Every time your mother calls.

Sloppy Joe: Wait until it squeaks.

Let's Talk DIRTY

A moderate amount of dust inside your computer is no cause for concern. However, a large buildup can cause heat problems, because it restricts airflow through vents and acts as insulation on motherboard components. Heat problems can prevent your system from booting up or cause components to fail altogether. A really large accumulation can even cause electrical problems, according to Apple, because it can prevent solid contact between such items as RAM cards and their sockets, thus causing system instability or boot-up problems.

Hendrickson says one of the most common breakdown items is the power supply, which can suffer from long-term heat problems—and a kaput power supply means your system won't start up. Floppy drives frequently fail, mostly due to too much dust flying into the open slot. CD-ROM mechanisms also top the list of trouble spots in Hendrickson's experience, usually just

because they've done their time. But you can still take steps to delay the demise of these parts.

When you open your computer, use a vacuum to remove the largest of the dust bunnies. This excludes iMacs and portables, though Apple insists these models Hoover in less dirt than older ones anyway because they don't use fans for cooling. (Since their chips require less power than those in older processors, they put out less heat and can use a radiant cooling system as opposed to fans.) While you have your Mac open, take care not to touch anything on the motherboard. It's sensitive to static electricity, and a vacuum cleaner can generate lots of that. For close work, use canned air to blow out the dust, but don't turn the can upside down or you might cause condensation to form on the components. Water and electricity don't mix, kids.

Speaking of water, check your system for corrosion while you have it open—this will look like rust or grayish spots on exposed metal



COMPRESSED AIR is great for blowing dust right out of your Mac.

URGENT Five Things to Do Immediately

Even if you skip everything else, do spend ten minutes to accomplish these five tasks—they'll make your Mac last longer and work better.

1. Back up your most critical files.
2. Rebuild your desktop.
3. Run Disk First Aid.
4. Zap your PRAM.
5. Clean all the air vents on your computer.

pieces. If you see any, move the computer to a drier climate—like Arizona. You can visit it with all those frequent flyer miles you rack up. If that's not an option, try to eliminate any humidity sources, such as—well, a humidifier. Also check to see that you've got all the RAM cards and expansion cards fully seated. Attach an antistatic strap (available from Radio Shack) to yourself before you touch anything.

Your floppy drive or removable cartridge drive is even more susceptible to dust. Manu-

facturers seal hard drives at the factory, but drives that accept cartridges are open to the whole dusty world. A dirty floppy drive can cause read-write errors or even destroy data. For floppy drives (or any removable-cartridge drives), use a vacuum to suck out dirt. Do not use canned air, or you'll simply blow the dirt deeper inside the drive. Use a cleaning disk (available from any computer or electronics store) to clean the floppy drive's head, but not until you've vacuumed out the dust. With a CD-ROM or DVD-ROM drive, use a cleaning disc to clean the optical lens, then wipe the tray with a damp cloth.

RECOMMENDED INTERVAL

Plain Jane: Every six months to a year, depending on the environment.

Anal Alan: Weekly, and move your air purifier next to your computer.

Sloppy Joe: When someone writes "Wash me!" in the dirt on your computer.



ZAPPING PRAM IS GOOD. Zapping the inside of your Mac with a static electricity charge is bad. Whenever you go under the hood (especially if you plan to touch any parts), you should wear an antistatic strap.



ALTHOUGH ZIP DRIVES aren't as exposed as floppy drives, they still collect dust. Vacuuming a removable cartridge drive never hurt anyone.

Ever notice how computers that aren't connected to the Internet run amazingly well? That's because their users don't download dubious shareware, update their software (thus causing new conflicts), or put their computers at the mercy of viruses and bugs. But most of us connect every day, so we need to take other precautions.

Evil Demons OUT!

When it comes to exorcising your system of the evil that lurks within, a few simple tasks can go a long way. First rebuild your desktop (actually, your Mac's desktop files, Desktop DB and Desktop DF) by holding down the Command and Option keys while your system starts up until you see a dialog box prompting you to rebuild. Your desktop files are invisible files that keep track of documents and applications on your disk and their associated icons. You should rebuild your desktop on a regular basis, but also do it if you start seeing generic icons (a blank white page with a corner turned

down) instead of custom ones even though you've got the relevant applications installed on your computer.

Another small yet important task is zapping your PRAM (Parameter RAM). Usually you only need to zap if you have INIT-related (control panel and extension) problems. A small battery on your Mac's motherboard powers your PRAM, which maintains some of your preferences while the system is turned off. Occasionally the PRAM gets corrupted and causes problems. Zap it by holding down Command-Option-P-R before the system starts up, and keep those keys down while the system restarts (and resets) a couple of times. Then you may have to reset

Scintillating System Fixes

some control panels, such as AppleTalk, Memory, and Mouse, since zapping PRAM causes them to revert to their default settings. The older your Mac OS version, the more control panels you'll have to reset. If you're running Mac OS 9, you don't need to reset most control panels, since the system stores the settings in software on the hard drive instead of in PRAM.

RECOMMENDED INTERVAL

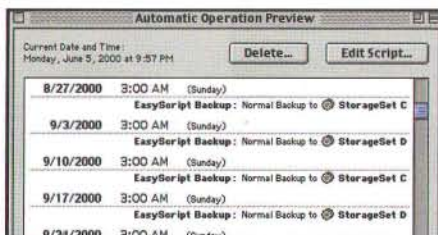
Plain Jane: Once a month.

Anal Alan: Every time you start up (so the aliens can't find you).

Sloppy Joe: When the aliens show up (then you can show them how to do it).

Back, Back, Back, and GONE!

Before you proceed further, back up your system—or at least critical documents. Careless maintenance can sometimes cause file loss and render disks unusable, and you want to make sure you don't lose any important information.



STICK TO THE SCRIPT. Retrospect Express walks you through creating a script for backing up your data. When you're done, you get a list of scheduled backups.

If you use a program such as Dantz Retrospect Express (\$50 SRP, <http://www.dantz.com>), you can back up your entire system, then set the program to amend backups with any added or changed files. If you don't own a backup program (or a disk or tape drive big enough to hold all your data), at least save your unique documents—letters, financial data files, browser bookmarks, email database, and other important files you can't re-create. Drag and drop them to some kind of disk such as a SuperDisk or Zip disk, or to an offsite Internet server such as Apple's iTools disk storage (<http://itools.mac.com/itools2.html>). If you do save to disks, store them offsite so at least one copy of your data will survive a calamity.

RECOMMENDED INTERVAL

Plain Jane: Full backup once a month, depending on use and importance of data; incremental backups once a week.

Anal Alan: Every file, every day, every save.

Sloppy Joe: Right after your hard drive crashes.

We Came, We Saw, We TRASHED

If you constantly download software, install new applications, or update those you already have, you've strewn pieces of these files all over your hard disk. For most applications, that's not a problem. But some apps need large chunks of contiguous disk space to work properly. Video editing apps, for example, may generate choppy results if they have to break up their files. Other applications may slow down considerably, espe-

cially if your disk is nearly full. For instance, Photoshop and other image editing programs use invisible swap files (much like virtual memory) so they can work with large images even if you don't have huge amounts of RAM. Say you open an image that exceeds the amount of RAM allocated to the app. When you start applying changes, the application doesn't modify your original file—it creates an invisible copy and applies the changes to that. If the app must hunt for free space, you may end up watching progress bars ticking along slowly.

To make your Mac run faster and more efficiently, you need to constantly clean out unnecessary files, duplicate apps, and anything else that takes up valuable hard drive space. Here are a few places to concentrate your efforts.

1. THE BIG FILE DUMP

To alleviate the problem of too many apps and too little RAM, first get rid of files you don't need. With Sherlock (or Find File in older versions of the Mac OS), search on the following terms (use Get Info to determine which file is the newest one):

- *SimpleText* and *TextEdit*—you only need one copy; the current version is 1.4.
- *Help* and *Guide*—our system had three ver-

Ways to Rebuild the Desktop

You can rebuild desktop files (invisible files that keep track of icon identities and file locations) by holding down Command-Option at startup and waiting for the dialog box to prompt you.

A better solution is to use a utility to delete the desktop files so that instead of rebuilding them, the operating system creates fresh ones from scratch. Micromat's TechTool Pro (and its freeware cousin, TechTool, which you can download at http://www.micromat.com/downloads/main_downloads.html#121), Casady & Greene's Conflict Catcher, and other products can delete desktop files.



CONFLICT CATCHER can delete your desktop files so that the operating system will re-create them from scratch rather than rebuild the existing ones.

Open SimpleText	alias	1/8/00, 2:29 PM
SimpleText	application program	3/15/99, 5:11 AM
SimpleText	application program	7/25/94, 6:00 PM
SimpleText	application program	5/30/97, 12:00 PM
SimpleText	application program	3/30/95, 2:56 PM
SimpleText	application program	5/6/99, 12:00 AM
SimpleText	application program	5/30/97, 12:00 PM
SimpleText	alias	8/25/99, 11:09 AM
SimpleText	alias	1/7/00, 7:05 AM
SimpleText Guide	Apple Guide document	11/20/96, 11:00 AM
SimpleText Guide	Apple Guide document	11/20/96, 11:00 AM
SimpleText Guide	Apple Guide document	11/20/96, 11:00 AM

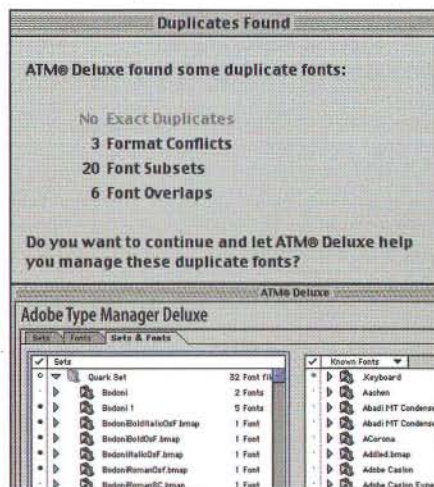
EVERY APPLICATION, every printer driver update, and every other piece of Mac software comes with a complimentary copy of SimpleText. You only need one.

sions of SimpleText Guide, none of which we use, at 358K apiece.

- *Install*—you'll find long-unused installer files, logs, and duplicates.
- DOS-type file extensions, such as *.tif*, *.doc*, *.pict*, and *.xls*. Weed out any duplicates.
- Any application name, especially *Stuffit*. Many applications bundle Stuffit, so you may have several copies. Only throw away duplicate Stuffit Expander files, though—you need the Stuffit Engine. Also check for old versions of *ColorSync*. Many applications don't check to see if you have the most recent version and install it regardless of whether you need it.

2. A FAREWELL TO FONTS

Are you a font junkie? Font folders often resemble Imelda Marcos's closet—lots of different models, but the matching purses got lost long ago. Use a font utility such as Extensis Suitcase (\$100 SRP, <http://www.extensis.com>) or Adobe Type Manager Deluxe (\$65 SRP, <http://www.adobe.com>) to check fonts for damage and to organize them. Do you really need the Brady Bunch font anymore?



LET'S PLAY DOUBLES—Adobe Type Manager Deluxe can track down duplicate fonts—for example, when you have both the TrueType and PostScript versions of the same font on your system. It also lets you turn fonts on and off without requiring a restart.

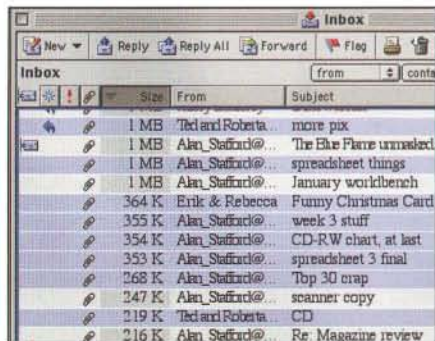
3. THE GREAT PREFERENCES CLEANUP

Check Preferences inside the System Folder for files associated with apps you don't use anymore. Warning: If you don't recognize the name of a file, you should probably leave it be. The Mac OS will regenerate the file if you open the application that uses it, but that file may store a serial number or other important settings. If you are dead set on throwing it away, have your serial numbers at hand just in case the application asks for it when you start up that program. Unfortunately, only trial and error can tell you if trashing a Preference file will delete that information.

Many times, trashing your Finder Preferences (*not* your Finder!) can solve problems, but even if you aren't having problems, make the OS regenerate this file every once in a while. However, you'll have to restart before you can empty the Finder Preferences file from the Trash.

4. E-GOODBYES

Other problem areas include your browser and email applications, which may secretly hoard huge files without your knowledge, thereby soaking up valuable hard drive space. Empty your browser's temporary file cache by going to its Edit menu and selecting Preferences, Advanced in either Microsoft Internet Explorer or Netscape Navigator. Click the button that says Empty Now (in Explorer) or Clear Disk Cache Now (in Navigator). Never open Netscape Navigator's cache folder (inside the Preferences folder) to empty the cache; the folder may contain thousands of files, and opening it may take the OS quite some time. Also, sort email by attachment in both the received and the sent mail folders—this way you can identify messages with large attachments you no longer need. Delete the messages along with the attachments. Otherwise, with some applications, you need to open up the attachments folder inside your email application folder and drag them



CIRCULAR FILE: All of those movie and image files add up, so once you've had a good laugh, throw them away. Sort messages by size, then pitch the biggest ones from your email program.

How to Uninstall Programs

manually to the Trash. A great time to clean out your browser and email is right before you do a full backup, so you don't have to waste time or space copying unnecessary files.

5. THE FINAL CLEANUP

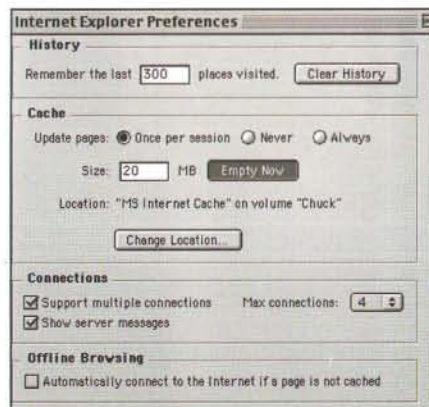
Finally, take a tour of the folders on your hard drive. Ask yourself: Do you still use that application? Do you still play that game? If not, trash them. You can always reinstall them. Do you keep tons of image files? Consider archiving them on a Zip, a CD-RW, or in Internet storage. Live near Area 51? If you still have important files on floppy disks, check to see if they work (after you've cleaned your floppy drive) and transfer their contents to a more stable backup medium.

RECOMMENDED INTERVAL

Plain Jane: Every month or two, depending on the task (see "Maintenance Intervals," p47) and on how much hard drive space you have.

Anal Alan: Whenever you see a piece of lint.

Sloppy Joe: When the lint obscures your power button from view.



WHILE CACHE FILES can speed the loading of pages you've recently visited, you don't want to expend valuable hard drive space on them.

Last American VERSION

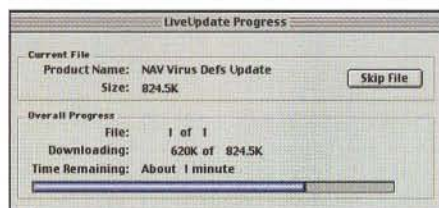
Now that you've cleaned out the old crap, it's time to bring in some new stuff. It's a great idea to keep an eye on Web sites such as Version Tracker (<http://www.versiontracker.com>) and MacUpdate (<http://www.macupdate.com>) for new software versions and updates.

Unfortunately, even those sites can't keep up with everything on your hard drive. Periodically, you should use one of two products: Symmetry Software's VersionMaster (free or regular email updates for \$20 a year, <http://www.versionmaster.com>) or Insider Software's UpdateAgent 8 (\$90 SRP on CD, \$30 Internet only, <http://www.insidersoftware.com>). These products catalog your hard drive and search for applications, extensions, and even fonts. They then compare the versions you have to their online database and tell you which ones are out of date. They're also great for finding duplicate files. VersionMaster will even tell you the version number of individual files—you'll find this useful if, for example, you install the latest version of QuickTime and it overwrites a couple of the 13 ATI video card extensions with out-of-date versions. Also, if you own Mac OS 9, run the Software Update control panel to check on new Apple updates.



YOU MAY THINK you've got your apps in order, but some old versions may be hiding from you. VersionMaster checks all applications (and even control panels) and identifies which ones are long in the tooth.

In addition to keeping your software fresh, updating your virus program regularly is becoming more and more important. Years ago, only a handful of viruses affected the Mac, but with the astonishing growth of Microsoft Word and Excel macro viruses, every Mac that uses those programs and accesses the Internet is at risk. Many viruses won't damage a Mac, but you can pass them on to a PC, which may suffer serious damage. Most virus programs post updated



UPDATE YOUR VIRUS DEFINITIONS monthly for optimum protection against the onslaught of Microsoft Word and Excel macro viruses.

definitions every month; you can run checks automatically or update them manually. For virus protection, consider Symantec's Norton AntiVirus (\$70 SRP, <http://www.symantec.com>) or Dr. Solomon's Virex (\$50 SRP, <http://www.mcafee.com>).

RECOMMENDED INTERVAL

Plain Jane: Every month for updating virus software, every couple of months for other software updates.

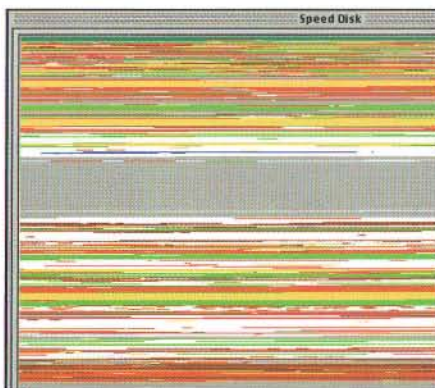
Anal Alan: As often as you sort your sock drawer.

Sloppy Joe: As often as you wash your socks.

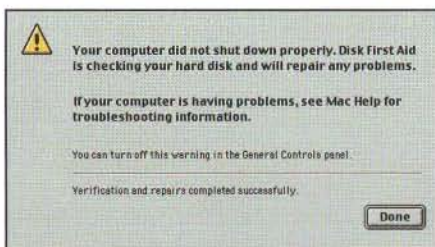
HOME Improvement

Once you've finished your housecleaning, use a disk maintenance utility to check for and repair file system damage, which can cause crashing and other erratic behavior. Symantec's Norton Utilities (\$100 SRP, <http://www.symantec.com>), Micromat's TechTool Pro (\$98 SRP, <http://www.micromat.com>), and Alsoft's Disk Warrior (\$70 SRP, <http://www.alfsoft.com>) do a good job of repairing such damage. A disk optimization tool such as Speed Disk (which comes with Norton Utilities) or TechTool Pro can organize the files

on the hard disk by type. That puts all the free disk space in one spot so applications can utilize it without having to split up their files. Norton Utilities recommends you use Disk Doctor before optimizing. In addition, Casady & Greene's Conflict Catcher (\$80 SRP, <http://www.casadyg.com>) can scan a folder (such as your Fonts folder) for damage.



IF YOU FREAK OUT when your mashed potatoes touch your peas, Norton Utilities Speed Disk's representation of the file layout on your disk may push you over the edge.



MAC OS 9 WILL RUN Disk First Aid after a crash, but other utilities do a more thorough job of disk repair, so run them periodically to make your system more reliable.

If you don't own any of those utilities, at least use Apple's Disk First Aid (on your system CD or from <http://www.apple.com/support>) to analyze and repair disk problems. Disk First Aid won't provide such complete diagnostic information as Norton Utilities or TechTool Pro if your system files have a real problem, but it comes in handy for routine maintenance.

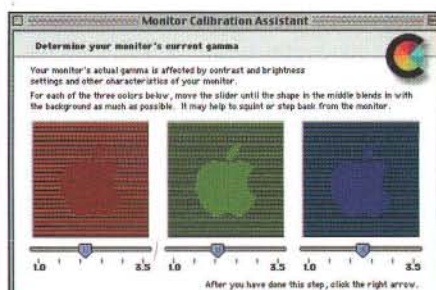
Last but not least, use Apple's Monitor Calibration Assistant (under Colors in the Monitors & Sound control panel in Mac OS 8.5 and up) to adjust brightness, contrast, and color balance correctly. If you're running an older OS, try a calibration app like Colorific from E-Color (\$50 SRP, <http://www.ecolor.com>). Then you won't have any excuse for all the fingerprints on your screen.

RECOMMENDED INTERVAL

Plain Jane: Every other month.

Anal Alan: As often as you balance your checkbook.

Sloppy Joe: Whenever you find your checkbook.



THAT MASSIVE HEADACHE may indicate a tumor, but more likely your monitor needs adjustment. Use the Monitor Calibration Assistant in the Monitors & Sound control panel before you consider surgery.

Despite your personality proclivities, try to stick to a maintenance schedule like this one.

MAINTENANCE INTERVALS

Maintenance Item	Number of weeks	1	2	3	One month	1	2	3	Two months	1	2	3	Three months	Four months	Six months
1 External cleaning															
2 Check cables															
3 Keyboard and mouse cleaning															
4 Internal dusting															
5 Zap PRAM															
6 Rebuild desktop															
7 Back up hard drive					(full)				(full)				(full)	(full)	(full)
8 Remove duplicate files															
9 Organize fonts															
10 Trash unused Preferences and Finder Preferences															
11 Dump email attachments and clear browser cache															
12 Eliminate unused apps and files															
13 Update software versions															
14 Update virus definitions															
15 Optimize hard drive															
16 Run disk maintenance utility															
17 Color-calibrate monitor															

Alan Stafford makes his living complaining about PCs and dreaming about squeaky-clean Macs. He refuses to admit which personality profile fits him.

reviews

Pencils are passé. Check out our Mac-to-school fashion.



FREAKIN' AWESOME!
The most valuable products, the coolest gizmos.



SPIFFY
A solid offering. Overall a good investment.



YEAH, WHATEVER
Neither recommended nor rejected. Some might like this, but we weren't impressed.



BLECHI
We want the time we spent testing this back.



TALK TO US at
<http://www.macaddict.com/debate>

Illustrator 9

design & graphics

COMPANY: Adobe Systems

CONTACT: 800-833-6687 or 408-536-6000,

<http://www.adobe.com>

PRICE: \$399 (SRP), \$149 (upgrade), \$249 (special offer for FreeHand, CorelDraw, Photoshop, InDesign, or PageMaker owners)

REQUIREMENTS: PowerPC, Mac OS 8.5 or later, 64MB of RAM, 105MB of free hard disk space, 800 by 600 color display, CD-ROM, Adobe PostScript Level 2 or later (for PostScript printers)

The rivalry between Adobe Illustrator and Macromedia FreeHand is right up there with King Kong and Godzilla or the Boston Red Sox and the New York Yankees. Recently, Macromedia stole Adobe's thunder by coming to market quicker with rev 9 of its vector-drawing software. But with the release of Illustrator 9, Adobe delivers a knockout punch, including transparency and Web-focused features that just may change the way we think about vector illustration programs.

We had Illustrator 9 up and running on our tangerine iBook in no time. It's a good thing we added that extra RAM, because Illustrator likes a lot of it (64MB, to be exact), and that's without getting into the heavy stuff. Illustrator ran more comfortably on our "serious" work machine, a 400MHz blue-and-white G3 with 384MB of RAM. It turns out that the app needs all of that RAM to give us what illustrators around the world have been asking for since the beginning of Macintosh time—transparency. FreeHand users will claim they've had transparency since version 8 via Lens Effects, but FreeHand offers the \$10-Rolux-you-bought-on-37th-Street kind of transparency. Illustrator is the real thing because transparency isn't simply an effect you apply, but rather an integral part of the program.

To start, you can control how see-through an object is via the opacity slider in the new Transparency palette. You can also apply different blending modes (multiply, lighten, luminosity, and so on) just as in Photoshop, but Illustrator takes it all a step



WE SEE THROUGH ILLUSTRATOR 9, AND THAT'S A GOOD THING. With its transparency and blending capabilities, you can create see-through objects, fading gradients, soft shadows, opacity masks, and more.

further by allowing you to apply these settings to any kind of object, group, or layer—even placed images, gradients, patterns, or brushes.

Turns out Illustrator has a soft side to it. How many times have you wanted to give a vector object a soft, feathered edge? Illustrator's new Live Effects lets you feather edges, apply soft drop shadows, and use other Photoshop filters such as Gaussian Blur. And it's all live, meaning you can change the settings of your effects at any time without losing detail.

The Appearance palette (yes, another palette—Illustrator has 24 of them now) is where you can take control of live effects by combining and arranging several different effects on a single object. For example, with the Live Shape effect you can create shapes that grow automatically to fit text (great for making Web navigation buttons). Also, you can now assign multiple-stroke and multiple-fill attributes to single objects. Once you've applied effects and attributes to

an object, you can define it as a style and apply it to any other object via Illustrator's new Object Styles palette.

If you use masks often, you'll be happy to know that Illustrator 9 can apply transparent effects on masks as well using a feature called an Opacity Mask. This allows you to use levels of gray to define a mask, enabling you to give photos soft edges (see "Creating an Opacity Mask," p50). Another kind of mask, a Layer Clipping Mask, allows the top-most object on a layer to become a mask for all objects and sublayers beneath it.

Speaking of layers, Illustrator 9 introduces nested layers—the ability to put sublayers within a layer. Hiding a layer hides any sublayers within it, and a layer mask will also mask objects on sublayers beneath it. Since you can apply live effects and transparency to a layer itself, simply dragging a sublayer into another layer can change its appearance.

In addition, Illustrator 9 boasts greater compatibility with Photoshop. While version

8 introduced the ability to export layers into Photoshop, version 9 lets you export editable text (if it's on its own layer) into Photoshop. Photoshop will also recognize Illustrator's transparency settings.

Playing catch-up with FreeHand, Illustrator adds features like a lasso selection tool, a Simplify command to reduce the number of points on a path, and customizable keyboard shortcuts for almost any tool or menu command. Illustrator still lacks support for multiple pages, required for preparing multipage PDF documents. This omission is surprising given that Illustrator's native format is actually PDF-based. Necessary to support transparency, this format makes for larger file sizes; however, with Apple's Quartz technology on the horizon in OS X, PDF looks like the direction of the future.

If you're a print designer, chances are you've had to handle trapping issues. Illustrator 9 introduces a new preview mode called Overprint Preview, which allows you to view your traps and overprints onscreen. If you're a Web designer, Adobe hasn't forgotten about you, either. Another view mode called Pixel Preview gives you the option to face the cold, hard truth about how your art will look rendered on a computer screen (see "What You See Really Is What You Get," p50).

In fact, Illustrator's stack of Web features will please dot-com designers. With support for hexadecimal Web-safe colors, you can specify and search for colors by their hex code—a far more intuitive method than scrolling through an entire list as you must do in FreeHand. Illustrator 9 also supports the export of scalable vector graphics (SVG), an emerging Web technology, as well as Macromedia's Flash format (SWF). A Release To Layers feature gives you the ability to convert text strings and blends to individual layers for export as Flash frames, files, or even symbols.

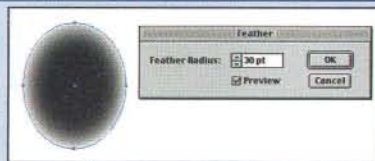
(continued on p50)

Creating an Opacity Mask

Masks with a soft-edged, dreamy look are increasingly popular in today's designs. In the old days, you had to use Photoshop to soften edges on a mask, but

today Illustrator 9 can do it better. Because Illustrator is a vector program, you can edit a mask after you've created it without having to re-create the entire mask.

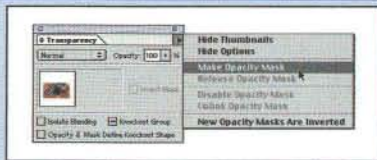
1 Create a shape you'd like to use for a mask (black fill, no stroke) and apply a feather effect to it by choosing the Feather option from the Stylize submenu under Effect.



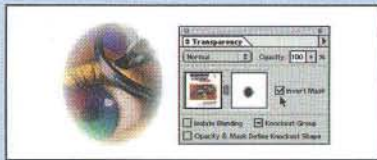
2 Place your feathered shape over the object you want to mask and select both of them.



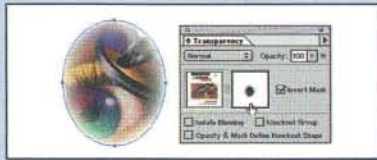
3 Choose Make Opacity Mask from the Transparency pop-up menu (the little black triangle in the upper right corner of the palette).



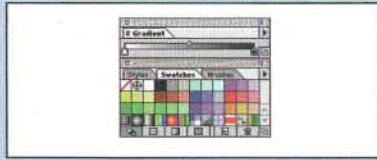
4 Check the Invert Mask button in the Transparency palette (if the New Opacity Masks Are Inverted option is checked in the Transparency palette above, you can skip this step).



5 You can edit your mask by clicking Opacity & Mask Define Knockout Shape in the Transparency palette. You'll know the mask is editable when Illustrator shows a thick black line around the thumbnail.



6 Apply the White, Black gradient (from the Swatches palette) to the mask and watch the art fade away. Far out!



audio

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(continued from p49)

One of the biggest challenges in creating art for the Web is maximizing quality while minimizing file size. FreeHand 9 introduced automatic optimization for Web export, but Illustrator's Save As Web feature is better. It allows you to view up to four versions of your image simultaneously so you can optimize your file until it's just right. FreeHand won't even give you a preview. Illustrator also provides useful feedback, like color tables (the exact colors used in the file) and approximate download speeds on different modems.

You pay a price for all this functionality (especially transparency), and that's speed. Illustrator 9 is significantly slower than version 8. How much you care about the performance drop depends on how important transparency and other new features are to you. We found that disabling layer thumbnails and not working in Overprint Preview mode helped speed things up. Another annoyance is the black-and-white software manual, which made some concepts like blending modes difficult to understand. We found Illustrator's HTML-based help system awkward to use, but Adobe offered some helpful tutorials on its Web site (<http://www.adobe.com>). Curiously, we found that Illustrator 9 files saved in EPS format had poor previews in QuarkXPress and InDesign, compared to the same files saved from Illustrator 8.

Illustrator 9 maintains the smooth, intuitive interface found in all Adobe applica-



NOW HOW MANY DO YOU SEE? Borrowing some technology from Adobe ImageReady, Illustrator 9 allows you to compare up to four different optimization settings at once when you're exporting GIF, JPEG, and PNG graphics for the Web.

tions, and learning to use the new features is fairly easy. Today's design trends demand cool transparent effects (as seen on Apple's Web site and in the OS X Aqua interface), and currently no tool out there can do it better than Illustrator. You'll find enough features and improvements in Illustrator 9 to justify the cost of the upgrade even if you specialize solely in either Web or print design. And if you do both, your dreams just came true.—*Mordy Golding*

good news: Live effects. Nested layers. Spectacular transparency and masking features. Object styles. Customizable keyboard shortcuts. Superb Web tools. **bad news:** No color manual. Slower performance than previous versions. No support for multipage documents. Large file sizes. RAM gobbler.



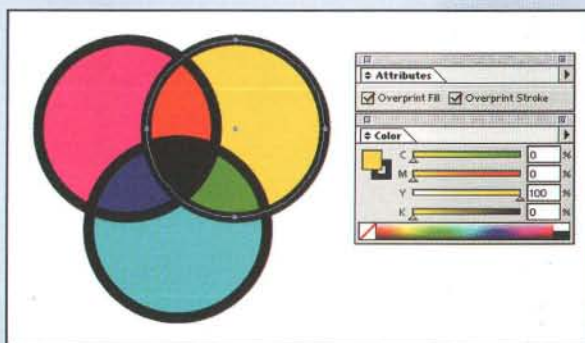
What You See Really *Is* What You Get

Illustrator 9 features two new kinds of preview modes: Pixel Preview for Web designers and Overprint Preview for print folks.

In the past, using Illustrator to design artwork for the Web was difficult. You knew when images would print well, but you couldn't predict how they would look rendered on a computer screen. Pixel Preview eliminates the guesswork. Zooming in (more than 100 percent) while you're in Pixel Preview will even show how your artwork will become pixelated—as if you were enlarging graphics on the Web. This mode also allows you to align art to the pixels on your screen so you don't get soft

antialiased edges when you don't want them. Previously, only Photoshop had this feature.

Don't worry, print designers—Adobe didn't leave you out in the cold. Illustrator 9's new Overprint Preview mode gives you what you've always wanted: the ability to view traps and overprints onscreen. In the past, the only way to check traps was to invest in expensive Barco hardware and software, or to output your file to film and match-prints or color keys. Screen redraw is a bit slow in this mode, so it's best to work in regular Preview mode, then switch to Overprint Preview to check your work. Overprint Preview is useful not only



TRAP IS A SNAP! With Illustrator's Overprint Preview, you can see how overprints and traps will appear before it's too late.

for viewing your trapping, but also for checking all those spot color jobs where you might employ overprinting to achieve special effects. If

you've ever had to explain to a client, "Well, that's not really the way it's going to look," you know what we're talking about.

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Cinema 4D XL 6

design & graphics

COMPANY: Maxon Computer

CONTACT: 877-226-4628 or 805-494-0718, <http://www.maxoncomputer.com>

PRICE: \$2,195 (SRP), \$495 for current registered users

REQUIREMENTS: PowerPC 604 or faster, Mac OS 7.6.1 or later, 64MB of RAM, 250MB of free hard disk space, CD-ROM

With version 6 of Cinema 4D XL, Maxon Computer is taking no prisoners in the battle for supreme 3D graphics and animation application. The \$2,195 price tag (higher than that of a well-equipped G4) is a bit daunting, but the combination of native features, plug-in architecture, and a built-in programming language named COFFEE make this an impressive application.

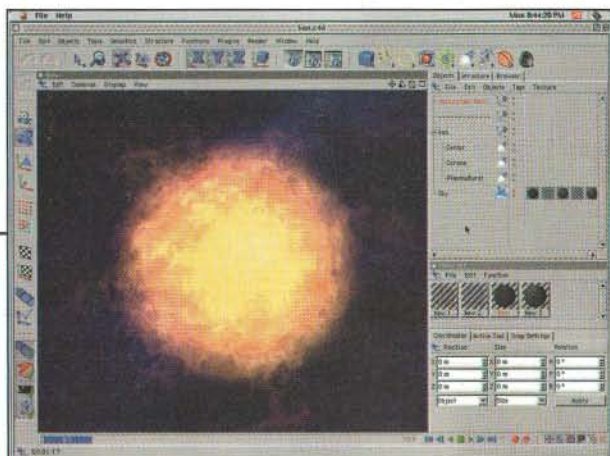
We ran Cinema 4D on an iMac DV with 192MB of RAM and on an upgraded 400MHz G3 with 320MB of RAM. Screen

redraws, rendering, and even particle system calculations (for simulations of water, smoke, dust, explosive flying debris, and so on) went fast. Installation was painless, requiring only that we register the program for a permanent serial number. Cinema 4D is multiprocessor aware, making it ready for those upcoming multiple-CPU G4s.

Although Cinema 4D is not a native Macintosh application, it runs as fast as one. We noticed only two interface quirks. For one, you can't use the Mac control key to pop up contextual menus. Instead, you must mouse down while pressing the Command key. Also, Cinema doesn't use the Mac menu bar. Behaving in a Windows-like fashion, most windows act as children within the parent application window. However, once we realized that we could essentially tear out windows and place them anywhere and that we could resize the parent window to allow second-monitor capabilities, we fell in love with Cinema's interface style.

In fact, this customizable interface is a main new feature of version 6. Users can adjust everything from window positions to toolbar icons to keyboard shortcuts. You can save these customized layouts to external files for transfer from one machine to another (perfect for traveling artists) or for multiuser machines.

Version 6 also includes new and improved modeling tools, including Hyper NURBS and a spline-modeling feature. It also has a wide assortment of model deformation tools for twisting, shearing, waving, and otherwise distorting objects. We found the spline and NURBS tools ideal for curved or organic shapes, while the standard polygon tools handle everything else. The Symmetry modeling features—another wel-



LIGHTS AND PARTICLES RENDER QUICKLY and with impressive results. We composed this sun of three lights and one material.

come addition—allow you to build half a model, then they mirror it to the other side when you're finished to complete it. Imagine building a complex model of a human figure. Symmetry lets you model half of the figure, duplicate that half, and view it as if it were a whole model.

An improved lighting system now includes tube lights (for simulating fluorescent lights or neon, for example) and new kinds of shadows: hard, soft, area, and colored. A new animation timeline window features function curves and colored layers for easier visibility and organization of elements.

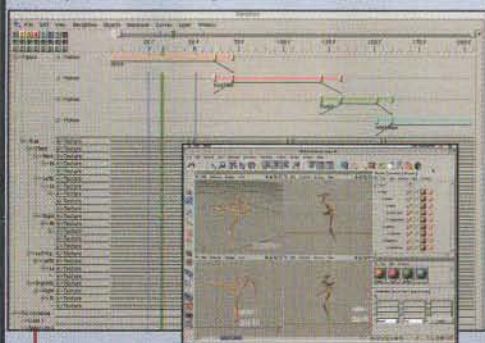
You can animate models using a variety of deformation tools, but for character animation, the Bones feature is the way to go. After you build a model, use this feature to add an underlying skeletal structure. Each bone you create has an envelope of influence, which allows you to build a one-piece model (such as a hand) and individually move a section of it (such as the fingers of the hand).

Cinema 4D is somewhat comparable to Hash's Animation Master, Play's Electric Image, and Newtek's Lightwave, although none of those applications has all the features Cinema offers. For the 3D graphics and animation dilettante, Cinema 4D is overkill, but the serious animator will enjoy a host of professional features and quality output practically unmatched by any other 3D tool.—Mike Caputo

Animotional Rescue

Nonlinear animation lets you build animation in modules or as separate scenes, then drop these into a timeline where they can overlap or flow into one another. Cinema's implementation of this hot new feature is called Motion Sequencing. In this example, we composed the fighter's move of four sequences. Each can slide forward or backward in time, compressed or expanded.

This feature offers great flexibility in tweaking the timing of a scene as you go without requiring that you reanimate the whole thing from scratch each time you make a change.



MOTION SEQUENCING OFFERS a flexible way to edit animated motion timing for that extra "kick" in your movement.

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design & graphics

COMPANY: Adobe Systems

CONTACT: 800-833-6687 or 408-536-6000, <http://www.adobe.com>

PRICE: \$299 (SRP)

REQUIREMENTS: PowerPC or faster, Mac OS 8.5 or later, 48MB of RAM, 100MB of free hard disk space, CD-ROM

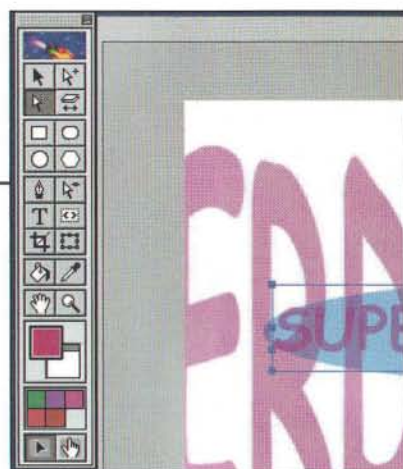
With its release of LiveMotion, a vector-based Web graphic animation tool, Adobe attempts to challenge Macromedia's grip on the Web animation market. The obvious comparison is to Macromedia's Flash 4, and while they're priced comparably, LiveMotion can't quite beat Flash. Even so, the fledgling Adobe product holds its own with a few new tools, and some animation-specific features that surpass Flash's implementation of similar tools.

With system requirements similar to Flash's, LiveMotion had snappy and responsive performance on both an iMac DV and a 9500 with a 400MHz G3 card. A big draw of LiveMotion is that it exports Flash SWF files, with or without an accompanying HTML file. Plus, its superior drawing tools, including Bézier-pen and shape-drawing tools, behave the same as they do in Adobe Illustrator. Each tool creates its own object that you can move and tweak, unlike in Flash, where objects

intersect and merge to become one object unless you place them on separate layers.

Those who find the Flash interface off-putting will likely prefer LiveMotion's Adobe-style look. Users of both Illustrator and After Effects will feel right at home. LiveMotion also imports native file formats from Photoshop and Illustrator while maintaining layer integrity. This compatibility allows you to prep a file in Illustrator, then import that file into LiveMotion for animation. And LiveMotion imports only references to files, not the actual files—an added plus. If you modify the original file, the changes won't adversely impact any already completed animation. The LiveMotion file updates automatically, and all you need to do is export the SWF file again.

Still, LiveMotion has its drawbacks. Our biggest gripe is the lack of interactive scripting tools. Sure, objects can have some rudimentary behaviors, but LiveMotion offers nothing like Flash's Action Script. While it's great for basic animation and rollovers, you can't use it easily for any complex interactive material just yet. The program lacks an alignment palette for lining up objects. Although it does have a rulers-and-guides feature for snapping, it doesn't have a distribution palette for distributing objects evenly. Speaking of palettes, LiveMotion has more info, tool, and option palettes than most applications. You can tear them off individu-



LIVEMOTION'S ANIMATION TOOLS are based on the same engine as After Effects, with the exception that LiveMotion doesn't handle QuickTime movies.

ally or consolidate them into one big window, but they are still annoying to wade through.

So who wins? On the one hand, Macromedia's triumvirate of Flash, Fireworks, and Dreamweaver makes for a powerful tool set. On the other hand, animation artists widely refer to Adobe's combination of Photoshop, Illustrator, and After Effects as the Holy Adobe Trinity.

If you need to create heavily interactive and scripted animated pages, Flash is still the way to go, but if you're creating Web animation and have used After Effects, LiveMotion is worth a look. It's still a better drawing and animation tool than Flash, and it's an exciting first release. —Mike Caputo

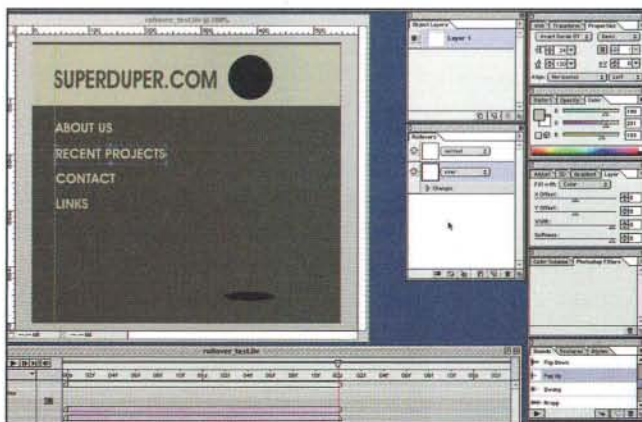
Not Ready for Prime-time Animation

LiveMotion is *almost* a terrific tool for creating motion graphics for the Web. While it's easier to use and more capable than Flash for animation, After Effects animators will notice some fundamental features missing, mainly motion path and keyframe interpolation control. Imagine animating a bouncing ball that comes in from offscreen on the left, bounces bottom center, and flies out offscreen on the right. You need to control the speed of the ball as it enters and leaves the frame, as well as the path it follows. LiveMotion's cumbersome method of adding appropriately placed keyframes makes the animation difficult to edit. After Effects' motion paths and keyframe controls with Bézier handles allow the animator to control things easily and elegantly. C'mon, Adobe—if you're going to copy most of After Effect's timeline and features, go the distance and give us the same level of control.

good news: Bézier drawing tools. Object driven. Strong animation features.
bad news: No Bézier control of motion paths or keyframes. No scripting function. Creates larger files than the competition.



spiffy



YOU'LL FIND ROLLOVERS PAINLESS using LiveMotion Object Layers and the Rollover palette (one of many palettes).

Alien Crossfire

fun & games

COMPANY: Aspyr Media

CONTACT: 888-212-7797 or 512-708-8100, <http://www.aspyr.com>

PRICE: \$19.95 (street)

REQUIREMENTS: Full version of Alpha Centauri, 180MHz PowerPC 603e or faster, Mac OS 7.6 or later, 32MB of RAM, 160MB of free hard disk space, 4X CD-ROM, 800 by 600 monitor

One of the marks of a great game is the immense amount of time you'll lose while playing it. Blink—it's morning. Blink—it's sundown. Blink—it's the next day, and you've lost your job. Alien Crossfire, the add-on pack for Sid Meier's Alpha Centauri (see *Reviews*, May/00, p46) has that sort of mind-numbing haze going for it in a big way.

In Alien Crossfire, as in its predecessor, you're back on Planet Chiron, an Earth-like planet circling the multiple star system of Alpha Centauri. This time, though, five new human factions and two new alien factions show up. The original inhabitants of Alpha Centauri, these two groups are engaged in a bloody civil war—hence the name of the game. Those who like the original balance of factions can customize the game to include a mix of the new additions, or even eliminate the new factions altogether.

Despite absolutely great gameplay, interesting new weapons, and new commerce technologies, Alien Crossfire has a couple of problems. First, the game quickly becomes indistinguishable from the original Alpha Centauri—and, truth be told, gameplay is largely the same. This won't be a problem for fans of the original—the new factions and technologies mesh well—but those looking for a new game might be disappointed. The second minor problem is that the game doesn't handle multiple monitor setups well—it confuses which monitor has control of scrolling and dialog boxes.

Still, our complaints are minor, and the price on Alien Crossfire is right. For about \$20, you get several new factions, new tech-



OH, SURE—THE ALIENS get the ugly colors. They're the green ones on the left. In Alien Crossfire, you'll definitely have a run-in or two with those not of your species. They're tough, too.

nologies, new secret projects, new life forms, and a new way to achieve victory. And, as anyone who has ever played a Sid Meier game knows, this is enough to make you lose several days of your life—without having to endure the attendant hangover.

—David Reynolds

good news: Addictive gameplay. More options than in the original version. **bad news:** Buggy multiple monitor support. Almost the same game as Alpha Centauri.



spiffy

Tips

- Explore your surroundings as fast as you can.
- Control-click units and squares to get at commands quickly.
- Concentrate on building colony pods until your colony is a sizable one, but don't expand too quickly or you'll leave yourself vulnerable to outside attack.
- Control your formers (big utility vehicles) manually. Although this takes extra time and effort, the increased efficiency is worth it.

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FrameMaker 6.0

productivity

COMPANY: Adobe Systems

CONTACT: 800-833-6687 or 408-536-6000, <http://www.adobe.com>

PRICE: \$799 (SRP), \$209 (upgrade)

REQUIREMENTS: Power Macintosh, Mac OS 8.5.1 or later, 24MB of RAM (36MB recommended), 35MB of free hard disk space (90MB recommended), 640 by 400 VGA monitor (640 by 480 recommended), CD-ROM

Two years and many development hours later, Adobe Systems has finally unveiled FrameMaker 6.0. This is the most powerful and impressive version yet of its award-winning software for producing and publishing content-heavy documents for print, Web, or CD-ROM distribution.

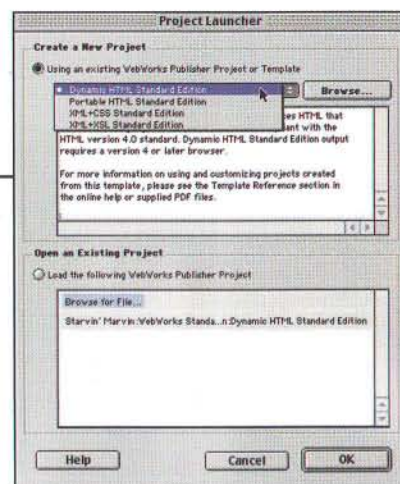
FrameMaker is the industry standard for technical writers whose complex needs go beyond word processing software, with its inability to handle large documents loaded with screen shots and cross-references. This high-end tool combines word processing and desktop publishing features (rotation, image resizing, font and color management) with robust document management capabilities. Although FrameMaker includes some drawing tools and a small clip-art collection, it's no substitute for Adobe InDesign or QuarkXPress.

FrameMaker's strength lies in its superior book-building functionality. Users organize individual files into collections called *books*—containers that allow global manipulation of properties such as page and chapter numbering. Book files reduce labor by generating tables of contents, indexes, reports, and other lists. FrameMaker's Smart Document architecture keeps content sepa-

rate from format, allowing authors to alter the layout of a document or an entire book with one swift click.

FrameMaker has captured attention with its support of single-sourcing—the ability to author a large quantity of content once, then publish it in multiple formats. Version 6.0 improves upon previous releases by packaging FrameMaker with Quadralay Web Works' Publisher Standard Edition (<http://www.webworks.com>), an application that easily converts FrameMaker content into Web-ready XML, HTML, and Dynamic HTML (including Cascading Style Sheets). By mapping FrameMaker formatting tags to appropriate HTML tags and selecting a predefined WebWorks template, users can point and click to convert FrameMaker files to the Web-ready format of their choice. Some users will find this new functionality alone reason enough to upgrade. One caveat: To modify the predefined Web templates, you'll need to either tweak them using an HTML editor or upgrade to Publisher Professional Edition—but unfortunately, Quadralay does not produce the Professional Edition for Mac.

We tested FrameMaker 6.0 on a Rev A iMac running OS 8.6. We converted an 8,000-page, 13-volume software manual into PDF and instructed FrameMaker (using its conditional text feature) to build smaller HTML files, which we then used to create an



THE WEBWORKS PUBLISHER INTERFACE allows users to convert FrameMaker files to a variety of Web-friendly formats.

online help system. The conversion process was a breeze, thanks to the step-by-step guidance of the New Project wizard.

Adobe made numerous minor but extremely useful enhancements, including tighter integration with Adobe Acrobat, XML file export, CSS creation, and easier book management features (including drag-and-drop file organization, simplified list generation, and global spelling checks). Users can even import individual pages of a PDF file into a FrameMaker document.

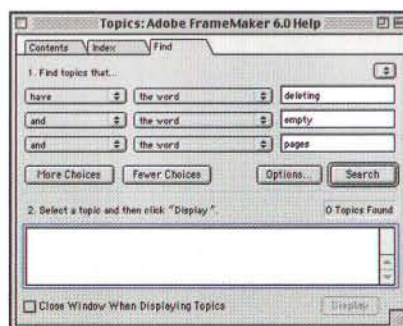
Although we can't say enough good things about FrameMaker 6.0, we'd like to see a few problems corrected. The help system is significantly better than version 5.5's but still needs work. It's pretty—however, the Find command doesn't locate all the relevant topics in the index. Additionally, having to refresh the screen when you edit text in a FrameMaker book file is a recurrent inconvenience that Adobe should have repaired several versions ago.

Nevertheless, if you're a current FrameMaker user, you should upgrade. The WebWorks Publisher interface is worth every penny of the upgrade price. If you publish large quantities of data in multiple formats and media, don't waste time wrestling with Microsoft Word. FrameMaker 6.0 is your best bet. —Scott P. Abel

Additional Resources

Here are a few online resources where you can find cool tips, tricks, and plug-ins for using FrameMaker on the Mac.

- Adobe Systems, <http://www.adobe.com/products/frameMaker>, gives the official scoop on Adobe FrameMaker.
- FrameUsers.com, <http://www.frameusers.com>, is an online user group and reference site for Adobe FrameMaker.
- MicroType, <http://www.microtype.com>, is a FrameMaker-to-Acrobat TimeSavers resource center.
- InFrame, <http://www.inframe-mag.com>, is the unofficial online FrameMaker magazine.



THE ADVANCED search options fail to find topics listed in FrameMaker's Help index.

good news: Automated Web page generation. XML support. Improved book-management functionality. Supports PDF import and export.

bad news: Requires frequent screen refreshes. Help system needs work.



spiffy

Illustration never looked so good.



Eye-catching

illustration, isn't it?

And yes, despite the glistening

highlights, the realistic textures, the

subtle shading, and the soft airbrushed

effects, this is a completely vector illustration.

And it's only possible with Canvas 7.

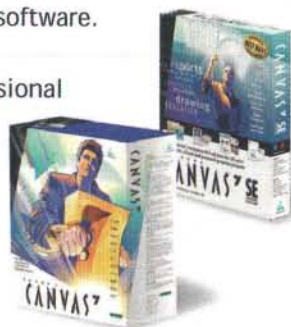
Match pinpoint precision with painterly strokes through Canvas 7's exclusive Sprite technology. Blur vector lines, paint transparency effects, apply image filter plug-ins to vectors, text and images. It's hard to believe that you can draw like this – nevermind in one, attractively priced program. When you're done, prepare your creative visions for print or web with an incredible array of over 40 file format filters.

Feast your eyes on Canvas 7 today, and get a whole new outlook on illustration software.

Now available in Professional and Standard Editions.

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today for as
low as \$**85!**

www.deneba.com/macaddict



D E N E B A

CANVAS™ 7

No comparison.



MacUser
★★★★★



Microtek ScanMaker 3600

hardware

COMPANY: Microtek Lab

CONTACT: 800-654-4160 or 310-297-5000, <http://www.microtekusa.com>

PRICE: \$89.99 (SRP), \$75 (street price)

REQUIREMENTS: USB-equipped Macintosh, Mac OS 8.1 or later, 64MB of RAM, 15MB of free hard disk space, CD-ROM

Microtek is no newcomer to the Macintosh peripherals market. Now, with the introduction of the ScanMaker 3600—a small, sub-\$100 USB scanner—the Taiwanese hardware manufacturer is staking out the low end of the USB scanner market. That rock-bottom price doesn't mean rock-bottom quality. On the contrary, the 3600 nearly matches the output of more expensive scanners and provides a suitable solution for most home and business applications.

Opting against the five faddish iMac colors, the 3600 is a sleek little off-white box weighing in at 6.6 pounds and taking up only 11 by 18 inches of precious desk space. There's no SCSI port for older Macs, just a single port for the included USB cable. Once we installed the ScanWizard 5 driver software, also included, the unit was truly plug-and-play. At a standard 8.5 by 11.7 inches, the 3600's scanning area is slightly larger than letter size. And for scanning thicker materials like books, the cover pops off.

With a maximum optical resolution of 600 by 1200 dpi and an interpolated resolution of up to 9600 by 9600 dpi, the 3600 produced vivid colors that closely matched our original image at a variety of resolutions. We didn't get terrific contrast or sharpness, however, until we tweaked the software settings a bit. At resolutions of 300 dpi and higher, we detected some mild banding in the darkest areas.

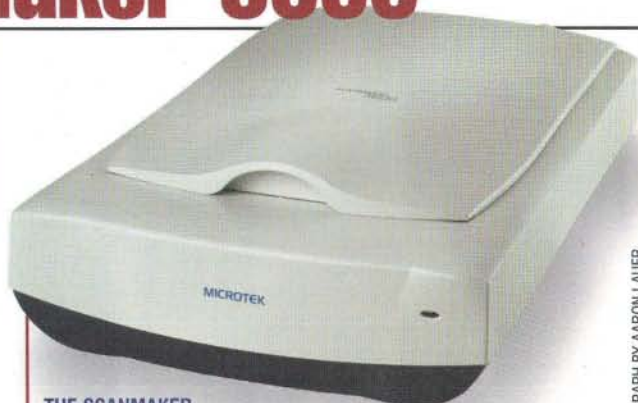
As you might expect from a USB scanner, the 3600 is no speed demon. A full 150-dpi, letter-size page scanned in under 2 minutes, about 50 percent faster than the Canon 630Ui USB scanner, but only 20 percent as fast as the \$1,400 Expression 1600 scanner using USB.

In addition to stand-alone and Photoshop plug-in versions of Microtek's ScanWizard

software, the CD also installs ScanWizard Assistant. This floating toolbar launches ScanWizard for simple scanning, scanning directly to your printer, or scanning and attaching a TIFF, PICT, or JPEG file to outgoing email. Compatible email software includes Claris E-mailer, Eudora Pro, Netscape, and Outlook Express.

ScanWizard's Standard Control Mode, designed with beginners or simple projects in mind, eschews Mac standards: For instance, the interface has buttons in the title bar and one of the options pops up an unnamed adjustment window with no obvious way to close it. Still, the interface is clearly laid out and easy to use. ScanWizard's Advanced Control Mode offers access to a whole slew of fine tunings—including saved custom settings for five different image adjustments and Photoshop-like settings for black and white points, color correction, filters, and contrast.

With a scanner this inexpensive, you can bet there are tradeoffs. The 3600 is bundled with a fine set of software—Adobe Photo-



THE SCANMAKER

3600'S SLEEK DESIGN reflects an underlying simplicity of design and ease of use.

PHOTOGRAPH BY AARON LAUER

Deluxe for image manipulation and Omnipage Limited for optical character recognition. However, it comes with no printed manual (though the Adobe Acrobat manual is clear and complete). The Microtek support site is skimpy on troubleshooting details, so it disappointed us to discover that live tech support is only available via toll call. After 15 minutes on hold, we gave up.



FOR REALLY SERIOUS TWEAKING, the advanced ScanWizard tools offer every adjustment the image geek could want.

At twice the price, we'd call the Microtek ScanMaker 3600 a fine scanner, offering a flexible interface for pulling rich, accurate scans from a variety of materials. But at the bargain price of \$90, we call the 3600 a sure thing for any small or home office that doesn't require absolute perfection.

—Joseph O. Holmes

good news: Inexpensive. Includes USB cable. Good image quality. **bad news:** No SCSI for older Macs. Best results require tweaking.



FOR ONE-CLICK ACCESS to scans, the ScanWizard Assistant toolbar is always available on startup.



BEGINNERS CAN STICK to the simple and useful preset options available in the ScanWizard Standard Control Panel.

DT9804

hardware

COMPANY: Data Translation

CONTACT: 800-525-8528,
508-481-3700 <http://www.datb.com>

PRICE: \$1,195 (SRP)

REQUIREMENTS: USB-equipped Power Macintosh, Mac OS 8.6 or later, Metrowerks Codewarrior Pro version 4 or higher



**IF YOU'VE
GOT THE MONEY, the DT9804 is
a beautiful way to get data into the field.**

This isn't the kind of toy you'd get for Christmas—it can cost more than the Macintosh to which you attach it! Nonetheless, we've come to love our DT9804 USB data acquisition unit through the trials and tribulations of constructing the iBorg. While it's not for the casual user, if you do need to control or read hardware, the DT9804 is worth its weight in gold.

If you're not familiar with data acquisition devices, think of them as the Big Brothers of BeeHive's ADB-I/O (<http://www.bzzzzz.com>) unit. Designed to supply or read analog or digital signals, they let you read the results of experiments, control hardware, and otherwise interface your Mac with the physical world. The DT9804 is one of several series of data acquisition devices offered by Data Translation. Each series has slightly different specifications and uses.

The DT9804's specs are enough to make any hardware geek worth his soldering gun drool. This beautiful black box sports 16 channels of digital I/O, a pair of counters/timers, 16 analog inputs you can sample 50,000 times per second, and 2 analog out-

puts accurate to 1 part in 65,536. The price is high, granted, but it's roughly in line with what other companies charge for similar equipment. The DT9804's modular design is ideal for connecting to equipment in the field—you use banks of eight-connector screw-terminal blocks.

Where the DT9804 stumbles is in its driver support. Currently you can only use the drivers from within Metrowerks Codewarrior, and then only in that program's PowerPlant rapid application development (RAD) framework. This makes the DT9804 unnecessarily difficult to use—plug-ins for REALbasic and LabVIEW would make the DT9804's ungodly power a whole lot more accessible. Still, if you've got the money and the coding skill, the DT9804 is a great device.—*Ian Sammis*

good news: Solid data acquisition device.
bad news: Poor driver support.
Relatively expensive.



The DT9804 is but one product in Data Translation's lineup of USB data acquisition modules. Here's the complete line. (Note: -EC variants are identical to the modules listed here except that the screw terminals are replaced with connectors for use with signal-conditioning racks.)

The Product	The Price (SRP)	Analog Inputs	Analog Outputs
DT9801	\$795 (\$695 for -EC version)	100,000 samples per second at 12-bit resolution	None
DT9802	\$895 (\$795 for -EC version)	100,000 samples per second at 12-bit resolution	2 channels with 12 bit resolution
DT9803	\$1095 (\$995 for -EC version)	100,000 samples per second at 16-bit resolution	None
DT9804	\$1195 (\$1095 for -EC version)	100,000 samples per second at 16-bit resolution	2 channels with 16-bit resolution
DT9805	\$895	50,000 samples per second at 16-bit resolution. Large dynamic range for use with Thermocouples	2 channels with 16-bit resolution
DT9806	\$995	50,000 samples per second at 16-bit resolution. Large dynamic range for use with Thermocouples	2 channels with 16-bit resolution

**Accessorize
your Mac and be
QUICK about it.**



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3.5" MO, Zip™, Jaz™, Orb Drive



3.5" Harddrive



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FireWire peripherals
for your Mac**

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- 3.5" MO, Zip™, Jaz™, Orb Drive
- CardBus - FireWire for PowerBook
- PCI card - FireWire for G3/G4

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Solutions by**

**2nd Wave
TECHNOLOGIES**



ADBe

SCUSBee

USBee

SerialBee

www.2ndwave.com

HP PhotoSmart C500

hardware

COMPANY: Hewlett-Packard

CONTACT: 888-999-4747, <http://www.hp.com> or <http://www.photosmart.com>

PRICE: \$599 (SRP), \$500 (street)

REQUIREMENTS: 120MHz Power PC or faster, Mac OS 8.6 or later, 16MB of RAM (64MB recommended), 32MB of free hard disk space, 620 by 480 color display, 256 colors, USB

With all the midprice zoom digital cameras flooding the market right now, there's no reason to settle for less than the best in design and features. The Hewlett-Packard PhotoSmart C500 digicam isn't top-notch in either of these areas, but it does have a feature or two that may make it a reasonable choice for you.

The C500 could use a real dose of consumer-oriented thinking. On the outside, the camera's ergonomics are awkward. The body is a little bulky for smaller hands, and unbalanced with batteries loaded. The shutter release, placed right next to the power button, makes it all too easy to switch off the camera accidentally when you want to snap a shot. Some of the mechanics are awkward as well. While we like the glass lens and 3X optical/2X digital zoom, the zoom action is a little

sticky. It tends to overshoot the focal length you're aiming for, forcing you to zoom in and out until you've hit it. The autofocus takes its time—the shot might well escape before the green light goes on.

On the inside, the camera's digital functions are much more confidently designed. The C500 sports a 2.2-megapixel CCD—now the standard for midrange digicams. It compresses pictures in JPEG in four modes, from Low (640 by 480, high compression) to Superfine (1,600 by 1,200, low compression). Other features include a macro mode, a black-and-white image mode, Timelapse and Burst shooting modes, and a self-timer. The internal software is easy enough to use. We particularly liked the ability to group, name, and index pictures in the camera.

The standard camera package comes with rechargeable AAs, but we couldn't pump a full charge into the brand-new batteries no matter how long they sat in the included charger. You can barely shoot enough pictures to fill the included 16MB Compact Flash card (about 30 shots at the default 1,600 by 1,200, medium compression setting) before running out of juice, even in daylight, no-flash conditions. Shame on HP for failing to include an AC adapter in the box.

The PhotoSmart C500 took sharp, color-true outdoor shots, no doubt due in large part to the glass lens. However, the camera couldn't capture fine detail in highly exposed areas—such as the sunlit top of a white dog's head in our outdoor test photo. The LCD screen would not stay on for more than 5 seconds when we tried to take a picture, and it would only work when we reviewed our shots. Even then we found the LCD very hard to see in sunlight,



PHOTOGRAPH BY AARON LAUER

THE VIOLET AND STEEL-GRAY Hewlett Packard PhotoSmart C500 shoots 2.2-megapixel images.

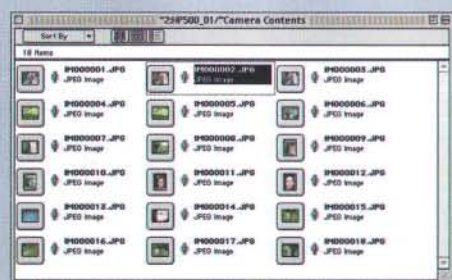
leaving us at the mercy of the camera's small, dim optical viewfinder, which you can't adjust for different diopters.

Despite its lackluster performance, the C500 offers a few worthwhile conveniences, provided you can take advantage of them. The camera's infrared JetSend wireless transfer lets you transmit photos to any JetSend-compatible HP device, such as another C500 or HP's P1000-series color printers. When downloading images to our iMac via USB using HP's PhotoSmart software, we hit a couple of minor snags, but no serious problems (see "Slide on Over," left). You can also view stills on a TV via the camera's composite video-out jack; match this with the shot-grouping feature, and you can display a slide-show presentation on your TV right from the camera.

The HP PhotoSmart C500 is an inoffensive little digicam that takes nice pictures for a moderate price. If you need the IR JetSend feature, in-camera shot grouping and presentation, and a better-than-average lens, this camera might be right for you. Otherwise, we find it a thoroughly middle-of-the-road device.—Miriam Anzovin and Steve Anzovin

Slide on Over

The Digita Desktop app bundled with the HP PhotoSmart C500 lets you capture, sort, save, and print images from the camera, and create an onscreen slide show. (As with several other digicams we've tested, you'll probably have to restart before the software will recognize the C500.) Downloading all images is easy, except when you've used the Burst or Timelapse picture-taking modes or the Grouped photo feature; then you'll have to download each set of images separately.



VIEW YOUR IMAGES in List or Slide view with the included Digita Desktop software.

good news: Glass lens. Well-designed internal software. JetSend infrared output.
bad news: Second-rate ergonomics. No AC block in box. Exposure problems in standard daylight shooting mode.



MiniView USB KVM Switch CS-102U

utilities

COMPANY: Iogear

CONTACT: 949-250-1260 or 888-999-2836, <http://www.iogear.com>

PRICE: \$149 (SRP), \$102.99 (street)

REQUIREMENTS: USB-equipped Mac, Mac OS 8.6 or later



SHARE THE JOY (or at least your monitor) with the MiniView USB KVM Switch.

These days, more and more Mac home users have multiple computers running. Iogear has targeted this emerging consumer market with the MiniView USB KVM, a keyboard, video, and mouse switch that lets two computers (Macs and/or PCs) easily share these peripherals.

On the front, the MiniView has two USB ports for a keyboard and mouse. On the back, you'll find the ports for connecting a monitor, as well as the upstream USB ports that connect back to the computer. The mon-

itor ports are VGA, so older Apple monitors will need a Mac-VGA adapter. Iogear has graciously included all the cables required.

The MiniView functions effectively except for an odd 5-second delay that occurs when you switch between computers. And when connected, you can't use the start up button on your keyboard.

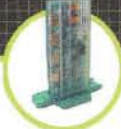
You can also use the MiniView to share additional USB peripherals, such as printers and scanners. While this is not a substitute for a network, it works—and it works well.

While the MiniView carries a hefty price tag, it's cheaper than buying an extra monitor. So if you have two USB-enabled machines you want to share, the MiniView will serve you well.—*Buz Zoller*

good news: No additional software needed. Cross-platform. Required cables included. **bad news:** Device cannot start up from the keyboard. Switching computers causes 5-second delay. Pricey.



MiniView™
USB KVM CONNECTIVITY



IOGEAR
www.iogear.com

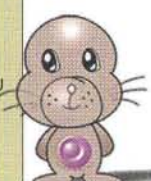
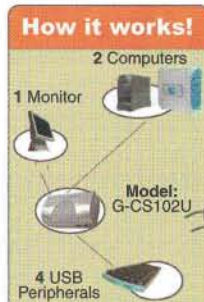
Control **Macs and PCs** with a single mouse, keyboard, and monitor!



Connectors are located in front for convenient access.

Our two-port MiniView™ USB allows two computers to share a monitor and four USB devices. Combine two PCs, two Macs or one of each! The MiniView™ USB is complimented with IOGEAR's patented Video Signal Enhancement technology, which provides ultra-high resolution. Use it with your mouse, keyboard, scanner... anything with USB!

visit our website for more exciting connectivity products.



www.iogear.com/macaddict

3 YEAR WARRANTY

Customers outside the U.S. can contact us at (949) 250-1260. Toll Free: 1-888-999-2836 email: sales@iogear.com



GrooveMaker 2.0

audio

COMPANY: IK Multimedia

CONTACT: 39-059-544190 (Italy), or 800-747-4546, <http://www.groovemaker.com> or <http://www.ikmultimedia.com>

PRICE: GrooveMaker 2.0 \$79.95 (SRP), GrooveMaker DJ Box 2.0 \$129.95 (SRP)

REQUIREMENTS: Power Macintosh, 32MB of RAM, 100MB of free hard disk space, 640 by 480 256-color monitor, CD-ROM



FIND A
DEMO of
GrooveMaker 2.0
on The Disc.

Recently we've seen a variety of software packages that create original remixes with a DJ-style multitrack interface. IK Multimedia widens that playing field with GrooveMaker 2.0. We tried it, and let's just say that GrooveMaker ain't exactly shaking up the dance floor.

Installation was a breeze on a 450MHz G4 running OS 9.0.4 with 256MB of RAM. Remix creation was equally hassle-free. We read the concise manual, loaded a song, pressed the play button, and started muting (turning off) some tracks and soloing others (playing individual tracks by themselves). GrooveMaker 2.0 ships with the application and an included sample CD. For \$50 more, GrooveMaker DJ Box 2.0 delivers the same stuff plus two extra sound-sample CDs. GrooveMaker supports a host of audio formats and exports mixes to AIFF, WAV, Ulaw, System 7, Sound, or GrooveMaker format, to name a few.



LIKE PANDORA'S BOX, the arpeggiator proved more problematic than helpful, but it looks kind of cute.

GrooveMaker offers 8 sound-file tracks, allowing you to mix only 8 sounds at any one time (by comparison, Mixman has 16 tracks). On the other hand, GrooveMaker includes an arpeggiator (a synthesizer that plays notes in user-programmable patterns) with rate, pattern, and sound options. The program also offers on-the-fly soloing, muting, and grouping of tracks. The dopest feature is a real-time sound audition and load option called Surfin' the Groove. After the user clicks an empty track, two sliders located in the center of the 8-Track Plate window allow the user to audition sounds while the remix is playing. You can hear in advance how the auditioned sound fits into the mix rather than guessing how the various sound textures will interrelate. Additionally, the Import Loop feature allows users to introduce and sync any loop relatively easily by entering either the loop's bar or beat length or its beats per minute.

Unfortunately, GrooveMaker's limitations overshadow its advantages. Its sequencer is more toy than tool, as you can't automate any of the major features—solo, mute, group, arpeggiate, pan, or volume. So while you may experiment with these parameters, the software can't record and play back your changes. These constraints make GrooveMaker function more like a live instrument, with which we made some convincing



THIS 8-TRACK PLATE is the main GrooveMaker screen, where you add sounds and mix it all together.

grooves quickly and easily. The Sync option synchronizes mutes and solos, but it is set to an 8-bar count, which you can't alter. In the end, to do anything remotely cool or unique we had to disable this option. We eventually did the same with the arpeggiator. Pressing Open in the arpeggiator (Arp) window crashes the software unless you raise the allocated RAM substantially above the minimum memory recommended.

Overall, GrooveMaker 2.0 less than impressed us. It may amuse beginners, but for serious beat-makers it's not a competi-



PERSONALIZE YOUR MIX: The Loopmaker option is easy and useful, offering more sound options than you'll find on GrooveMaker's companion sound CDs.

My Name's Count Groove-Ula and I Want to Suck Your Funk

Remixing is fun and enjoyable for the whole family. To start, load a stock song off one of the included sound CDs. Press the play button and solo one sound, preferably a pad or bass. Add other sounds at rhythmic intervals. If you have no sense of rhythm, use the sync option so that all musical parts play in time with each other. After you solo all the sounds, let them play and click the Group button, located in the main 8-Track Plate window, to build a group. Solo the group to break down the mix. Now you may begin rebuilding the mix by once again reintroducing sounds at rhythmic intervals, all in real time. The process takes some getting used to, but the result gets interesting very quickly.

tive alternative to other products like Mixman Studio or even Sonic Foundry's Acid. This package simply can't create fresh, spontaneous remixes because it lacks automation and has limited tracks. Sorry, GrooveMaker, no parking on the dance floor.—Andrew Fried

good news: On-the-fly sound preview. Onboard arpeggiator. Attractive GUI. **bad news:** Weak sequencer. Only 8 tracks. Limited sync options.



iMaxPowr G4 433MHz Upgrade

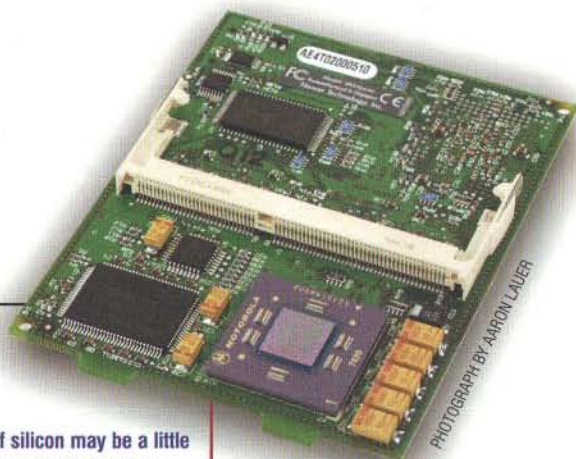
hardware

COMPANY: Newer Technology

CONTACT: 316-943-0222, <http://www.newertech.com>

PRICE: \$699 (SRP), \$549 with \$150 rebate

REQUIREMENTS: iMac without built-in FireWire



PHOTOGRAPH BY AARON LAUER

INSTALLING THIS BIT of silicon may be a little tricky, but the results are worth it. Trust us.

Talk about giving your iMac a *huge* boost in power! The Newer Technology iMax-Powr G4 upgrade takes a stock iMac (without FireWire) and makes it run at G4 speed—all without any additional software.

Installing the iMaxPowr G4 is not easy, but it's not much more difficult than installing RAM in an iMac. While it works without additional software, you'd be missing the point of upgrading without it. To take full advantage of the G4 processor, make sure to take advantage of all the AltiVec (or Velocity Engine) capabilities

by installing the four Velocity Engine libraries located on your Mac OS 9 CD.

Performance was excellent, almost double the speed of an original 233MHz iMac—just as you would expect. The upgrade really shines when you're using the G4's AltiVec unit—for example, with Photoshop filters or with Casady & Greene's SoundJam. Here, the upgrade card performs as much as 2.5 times faster than a stock iMac. Of course, a processor upgrade doesn't do much for video speed or disk speed.

The iMaxPowr G4 makes an impressive upgrade. Combined with Mezzanine-slot upgrades (such as a second video card or a SCSI card), the card makes an iMac especially droolworthy.—David Reynolds

good news: Lightning fast. No driver software needed. Stable. Great documentation. **bad news:** Only boosts processor-dependent performance—no help for disk or video speed. Complex installation.



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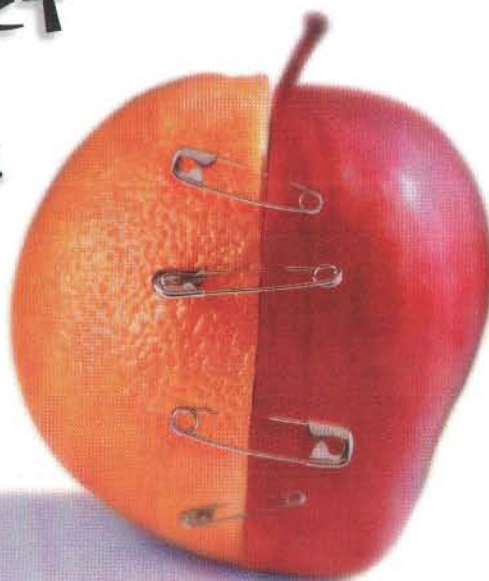
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InterView 2.0

multimedia

COMPANY: XLR8 by Interex

CONTACT: 800-513-9744 or 770-564-5682,

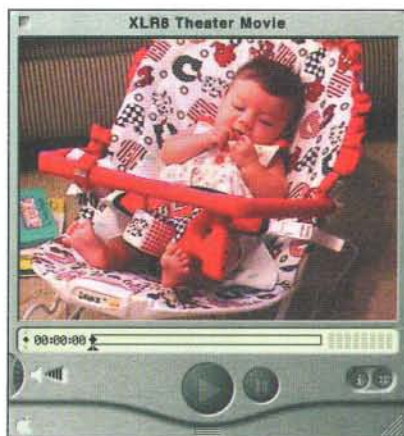
<http://www.xlr8.com>

PRICE: \$99 (SRP)

REQUIREMENTS: USB-equipped Macintosh (G3 or faster recommended), Mac OS 8.6 or later

A FireWire-enabled Mac with video-editing software is the obvious ticket to joining the desktop video revolution. With the iMac DV and iMovie software, Apple has further lowered the barrier to entry. But what if your computer lacks a FireWire port or even a PCI slot to accept an add-on video-capture card? How can you participate? The answer is InterView 2.0, from XLR8 by Interex. This handy device allows any USB-equipped Macintosh to capture video, and it could jump-start your career as the next Steven Spielberg.

InterView 2.0 is essentially a software-only update to XLR8's already successful InterView 1.0 product. This little device



THIS IS WHY you need InterView.
Some things you just need to share with grandparents.

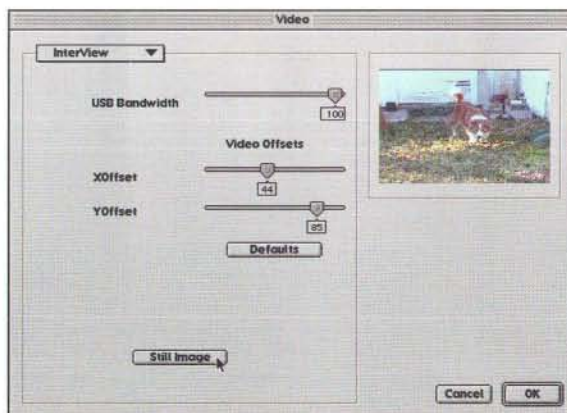
allows you to capture video at a resolution of 320 by 240—good enough for Internet-distributed QuickTime movies, but not for transfer to videotape. InterView 1.0 consists of a small box with a USB cable, an S-Video cable, and a composite video cable. Installation is easy. Simply plug the USB cable into one of your Mac's built-in USB ports or an external hub. You need a

DON'T HAVE FIREWIRE?
InterView brings desktop video to any USB-enabled Mac.

powered USB port, so you can't use your keyboard's extra ports. The InterView device routes audio from your VCR or camcorder to your computer's audio-in jack (the package includes this cable). To connect your video source, plug a composite video cable or an S-Video cable into the box.

Software installation is just as simple. Run a couple of installers from the CD and restart—you're ready to go. InterView ships with Strata VideoShop 4.5, a full-featured editing software package. Anything the pros can do, you can manage with this amazing software. In fact, its powerful interface and features may overwhelm some first-timers, and NLE (nonlinear editing) neophytes may find its terminology baffling. But practice and perseverance is all it takes to overcome the initial learning curve.

The InterView 2.0 driver software now works with any standard Mac application that can accept a video source, such as Adobe Premiere or even Final Cut Pro. One frustration from version 1.0 still remains: You still have to dig down into the Video Settings dialog box to find the option for taking 640 by 480 screen grabs—this is really a shame, since many users will no doubt overlook this handy feature.



CAPTURING 640 BY 480 STILL IS EASY TO DO—but it's hard to find this feature, which nestles in an obscure section of the Video Settings dialog box.

Version 2.0 introduces a new application called XLR8 Theater, which allows you to view full-screen video input from a DVD player, satellite tuner, or VCR. It works well, with minimal lag, and provides a handy way to preview video.

All in all, InterView 2.0 is a great solution for capturing video and grabbing stills via USB. The price is right, the software has tons of features, and installation is a breeze. The only drawbacks are its inability to capture full-screen video (a limitation of USB, not of InterView itself) and to send video to a VCR or TV.

If you want to dabble in video editing, InterView will get you going quickly and easily so you can start that cinematic masterpiece right away.—*Buz Zoller*

good news: Perfect video-capture solution for USB Macs. Bundled with full version of Strata VideoShop 4.5. Grabs 640 by 480 still images. **bad news:** Can't capture high-quality full-screen video. Captures audio via Mac's audio-in jack. Requires powered USB port.



spiffy

APS CD-RW 8X4X32 FireWire Pro2

hardware

COMPANY: APS Tech

CONTACT: 800-874-1427 or 503-844-4600, <http://www.apstech.com>

PRICE: \$399.95 (SRP)

REQUIREMENTS: FireWire-equipped iMac DV, Power Macintosh, or PowerBook



**BEHIND THIS
UNASSUMING BEIGE EXTERIOR
lies a superfast FireWire CD burner.**

FireWire has finally come of age. APS's newest CD-RW drive, the 8X4X32 FireWire Pro2, exploits the technology's speed and ease-of-use. If you have FireWire and need a CD burner, this drive is for you.

The FireWire Pro2 comes in a sturdy case with a fold-down face so that the drive itself disappears from view when you close the all-beige enclosure. The mechanism itself is a Plextor Plexwriter 8/4/32A, the same one used in the BellStor Eclipse (see *Reviews*, Jul/00, p75). It is capable of recording CD-R

disks at 8X and CD-RW disks at 4X, and functions as a CD reader at 32X speed.

Setting up the FireWire Pro2 couldn't be easier. Plug the included FireWire cable into your computer, plug in the included power cable, and turn on the drive. As for software, the drive comes with Toast 4.1 OEM, the first Toast version to support FireWire CD burners natively. Toast works like a charm with this drive, which burned all of our disks successfully. As for speed, this one flies. At 8X, it can create an entire 650MB disk in about 9 min-

utes. This drive functions flawlessly as a CD-R, a CD-RW, and a plain old CD drive. It still can't play audio CDs, though.

In short, the APS Tech CD-RW 8X4X32 FireWire Pro2 really rocks. Now, if we could only convince APS to make one in blueberry.—*Buz Zoller*

good news: Fantastic 8X recording! Includes Toast 4.1 and native support for FireWire.
bad news: Beige case.



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web site design and development available

<http://mac.astrohosting.com>



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Streaming
Service

Radialogic Storage Master

utilities

COMPANY: Prosoft Engineering

CONTACT: 925-426-6100, <http://www.prosofteng.com>

PRICE: \$89.95 (SRP)

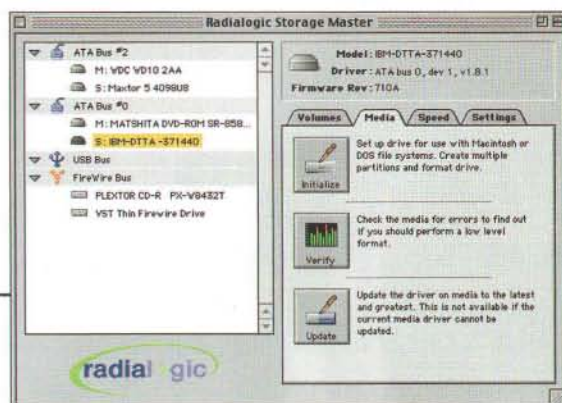
REQUIREMENTS: PowerPC-based Mac, Mac OS 8.1 or later (Mac OS 8.6 or later recommended), 2MB of RAM, 6MB of free hard disk space

Although most Mac users will never need a disk drive utility other than Apple's Drive Setup, the small pool of hardware and software hackers as well as third-party SCSI device owners will find Radialogic Storage Master an indispensable tool that supports almost any storage device.

Storage Master's interface makes it easy to wade through a sometimes-confusing array of devices and volumes (remember: a single hard drive can have several volumes). It

makes formatting, password-protecting, and testing as easy as selecting a tab and clicking a button or two. Its Internet-enabled installer, which can contact Prosoft servers and download the latest versions, is a real benefit, because newer drivers are generally better, especially in the case of FireWire drivers.

Storage Master's drivers handled the wide range of drives we threw at them. They didn't produce any noticeable increase in hard drive performance over test drives' original drivers.



RADIALOGIC STORAGE MASTER sports an elegant, clear user interface that clearly shows all available devices and puts the program's features right at your fingertips.

Any Mac storage device worth its salt should ship with its own device drivers. But for a select few folks who work in specialized fields, Storage Master is a good investment.

—David Reynolds

good news: Good device support. Elegant interface. Bootable CD.
bad news: Unnecessary for most users. No noticeable speed increase.



spiffy

KnockOut 1.5

design & graphics

COMPANY: Corel

CONTACT: 800-772-6735 or 716-871-2325, <http://www.corel.com>

PRICE: \$279 (SRP), \$99 (for CorelDraw, Corel Photo-Paint, Adobe Photoshop 5.5, or Ultimatte KnockOut users)

REQUIREMENTS: PowerPC or faster, Mac OS 7.6.1 or later, 64MB of RAM, 27MB of free hard disk space, 24-bit color display adapter

Masking the background in an image of a person ranges from easy, if it's Shaquille O'Neal, to a big-hair nightmare, if it's Pamela Anderson Lee. Corel KnockOut 1.5 helps you create realistic masks, no matter how teased the 'do. The application masks or "knocks out" the backgrounds of images with semitransparent objects (such as smoke, hair, and glass), so you can transfer the unmasked portion for use in other images.

For basic masks of high-contrast images, KnockOut works well. However, in fuzzy

images or low-contrast transition areas, KnockOut often can't differentiate the pixels you want to keep from the ones you want to mask (but neither could you, or you wouldn't be begging the software to do it). A few tools help define wanted and unwanted pixels, but they're tedious to use. None of the tools offer multiple undos and redos, either, and you can't use the application with CMYK images, so you must convert to RGB with an image editor before processing.

KnockOut requires at least 64MB of RAM, and even a 100MB allocation wouldn't

display a substitute background image behind the unmasked object. However, KnockOut does process masks quickly, no matter how little RAM it's gobbling.

KnockOut can't do miracles, but for many images, it produces impressive, realistic results.—Alan Stafford

good news: Preserves the big-hair look. Easy to use with high-contrast images. **bad news:** Piggish RAM requirements. No CMYK image masking. Difficult to use with low-contrast images.



spiffy



WISH WE WERE HERE. Corel KnockOut provides quick and accurate masking to place you convincingly in front of any background.

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Pontis SP504

hardware

COMPANY: Pontis

CONTACT: 49-9435-5407-0 (Germany) or 404-401-0707 (U.S. distributor), <http://www.pontis.de>

PRICE: \$239.99 SRP (64MB), \$169.99 SRP (32MB)

REQUIREMENTS: PowerPC or faster, Mac OS 8.5 or later, 16MB of RAM, 3MB of free hard disk space, CD-ROM, USB port

Some high-and-mighty types may say money can't buy happiness, but we'd say they're clearly wrong. The amount of happiness and satisfaction derived from going anywhere with your favorite tunes is immeasurable. The latest way to experience this joy is the Pontis SP504, a portable MP3 player that holds up to 64MB of music. A version that holds 32MB costs less, but believe us when we say you *will* become bored once the same eight or ten songs start playing over and over—and over—again.

Pontis eschews the idea of internal memory and has designed its player to store all of your music on its special MultiMedia cards—a smart move, since this makes the player almost endlessly expandable. The 64MB version contains two slots (32MB each) and two cards, while the lower-memory version contains one slot. You can buy more cards and simply swap your favorite mixes or albums in and out, though MultiMedia cards aren't like Memorex tapes—they cost \$89.95 each. The good

news is that users can upgrade the player to 8GB total memory once 4GB cards become available (Pontis admits this technology is a looong way off). If this is true, however, then this MP3 player will last far into the future. Even if 4GB cards are just a pipe dream, Pontis expects to make 64MB cards available as early as this fall.

The Pontis MP3 player ships with a version of its LED software for downloading music. Unfortunately, the Mac software does not include a ripper and an encoder as the PC version does. Also, you should immediately visit the Pontis Web site for the latest update of the software, as the shipping version has some *major* bugs. The player's software is basic, allowing you to create multiple playlists and then download them to your cards one at a time. If you want to get rid of one of the first or middle songs on your player and replace it with a different tune, you can't. You can only delete the last recorded song, so you need to have the fore-



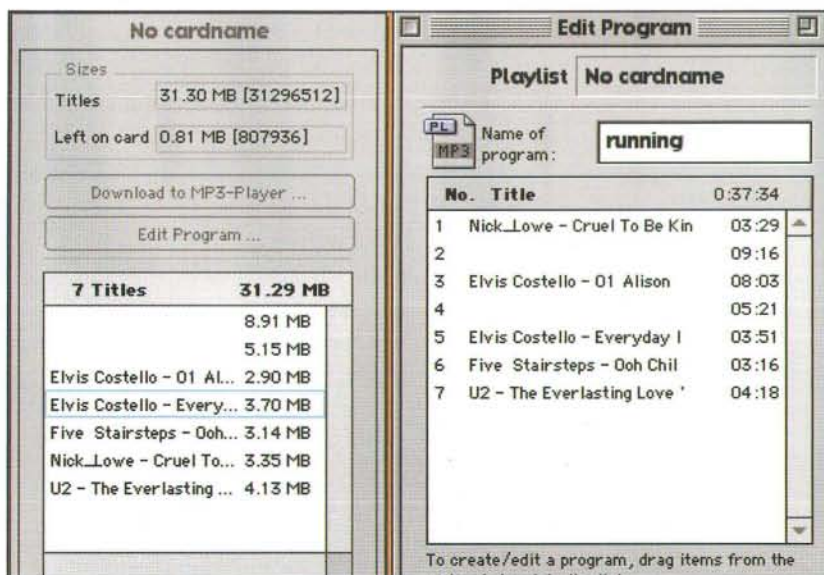
BIGGER IS NOT BETTER
when it comes to MP3 players,
but we like the Pontis SP504 all the same.

PHOTOGRAPH BY AARON LAUER

sight to put your least favorite music at the end of your playlists. Nor can you change the order of songs once they're on your player—unless you're willing to download the entire playlist again. This is a bit of a hassle, considering that the download time is not amazingly quick (though it is typical of USB)—it takes approximately 4 minutes to download 37.5 minutes of music.

The sound quality of the Pontis SP504 is solid, and you can adjust the bass and treble on the player itself. It easily handles all sorts of MP3 formats, including SoundJam, Real-Player, QuickTime, and MVP. You can also opt to have the player shuffle songs for you, and you can edit your playlist so a certain song appears more than once—without taking up more memory. Another nice feature is that the player's screen tells you how much life is left in the two AA batteries powering the machine—they provide about ten hours of music, so you'll replace them often.

As far as MP3 players go, the Pontis SP504 is on the hefty side—about the size and thickness of a pack of swanky cigarettes. It weighs in at 90 grams and unfortunately does not come with a belt clip. It does, however, come with a carrying case and a set of headphones. The SP504 isn't perfect, but overall it works, and it's expandable. The quirks are a small price to pay for the bliss you will get from listening to your favorite music on the go.—*Cathy Lu*



good news: Works great and sounds good. Stores about 75 minutes of music. Expandable.
bad news: Oversized. Can't reorganize playlists on device.



spifty

WINDOWS GALORE...you can edit the song order of your playlist in a separate window.



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Freeway 3

design & graphics

COMPANY: SoftPress

CONTACT: 800-853-6454 or 415-331-4820, <http://www.softpress.com>

PRICE: \$249 (SRP), \$79 upgrade from Freeway 2.0 (free if you bought Freeway 2.0 after February 1, 2000)

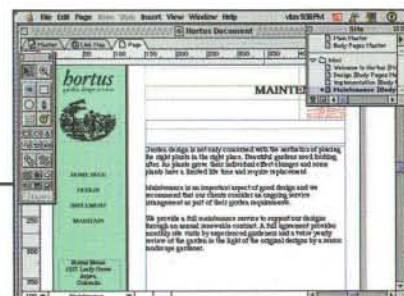
REQUIREMENTS: PowerPC or faster, Mac OS 8.1 or later, 8MB of RAM, 20MB of free hard disk space, color monitor

SoftPress has updated Freeway, its Web page design program, with a faster rendering engine, a multilingual Web page, and better JavaScript support. Though priced \$40 below its main competitors, Freeway 3's continued inability to view or edit HTML code makes for a lackluster upgrade.

Freeway provides advanced typographic controls and overlapping elements for considerable control over a page's appearance. Those familiar with desktop publishing-style interfaces will get up and running quickly. The program's ability to compose pages in HTML versions 3.2 and 4.0 is crucial for compatibility with older browsers.

Plus, Freeway can convert TIFF, Illustrator, and other graphics files into Web-friendly GIF or JPEG formats.

Still, Freeway remains WYSIWYG only. You can't see a page's underlying HTML code. This constraint presents a severe problem in designing, for example, feedback forms, which require direct code manipulation. Converting HTML files from other applications like Adobe GoLive is roundabout. Freeway forces you to create a new file, import the (unseen) HTML from another file via a menu command, and then clean up any formatting differences. Also, the program does not use contextual menus.



FREEWAY BRINGS desktop publishing-style control to Web design.

There is no pressing need to switch to Freeway unless you really need backward compatibility and automatic graphics formatting. Users who bought Freeway 2.0 after February 1, 2000, are eligible for a free upgrade; some older users will need the new features, but the rest may just want to wait.

—Mark D. Shuchat-Marx

good news: Lots of features. Excellent manual. Cheaper than competing products. **bad news:** Can't edit HTML code or convert HTML files from other programs directly. No contextual menus.



Tomb Raider: The Last Revelation

fun & games

COMPANY: Aspyr Media

PRICE: \$39.95 (SRP)

CONTACT: 888-212-7797 or 512-708-8100, <http://www.aspyr.com>

REQUIREMENTS: Power PC 233MHz or faster, Mac OS 8.1 or later, 32MB of RAM, 166MB of free hard disk space, 4X CD-ROM, 3D acceleration (ATI Rage Pro, 3dfx Voodoo 1 or later)

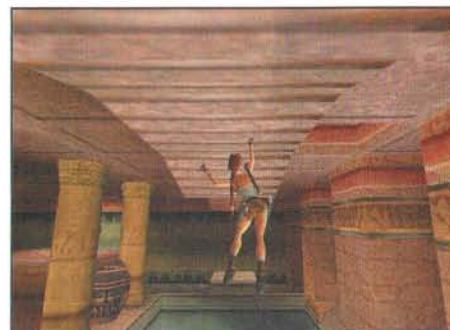
In some ways, Tomb Raider: The Last Revelation takes the series back to its roots. Lara Croft—startlingly top-heavy at the age of 16—starts out in a desperately annoying “training” mode that fails to train almost as much as it fails to entertain. The control method is as unintuitive as ever, but get past this initial obstacle and you’ll find yourself immersed in the most graphically adept and technically ambitious game in the series.

Lara now swings on ropes and kicks down doors. More important, she can activate switches (to control secret doors and movable statues) from afar using weapons or projectiles. Add to that some interesting vehicle sections and neat set pieces—such as the level where Lara has to make her way along the roof of a speeding train. Even the graphic engine has undergone a bit of spit

and polish. Better light sourcing, graphics card support, and an enhanced polygon engine (for both characters and backdrops) make for all-round prettier play.

Sadly, though, this game, like its predecessors, relies on ill-conceived puzzles and badly defined objectives. The game takes place entirely in Egypt, so many locations look the same—a problem you’ll find annoying as you get confused and lost for the umpteenth time. The genuinely involving (and creepy) plot makes up for the haphazard placement of switches and puzzles. A real mystery story unfolds cinematically between levels with some of the best full motion video sequences on the Mac.

In short, the Last Revelation is a huge, attractive, and ultimately rewarding Macin-



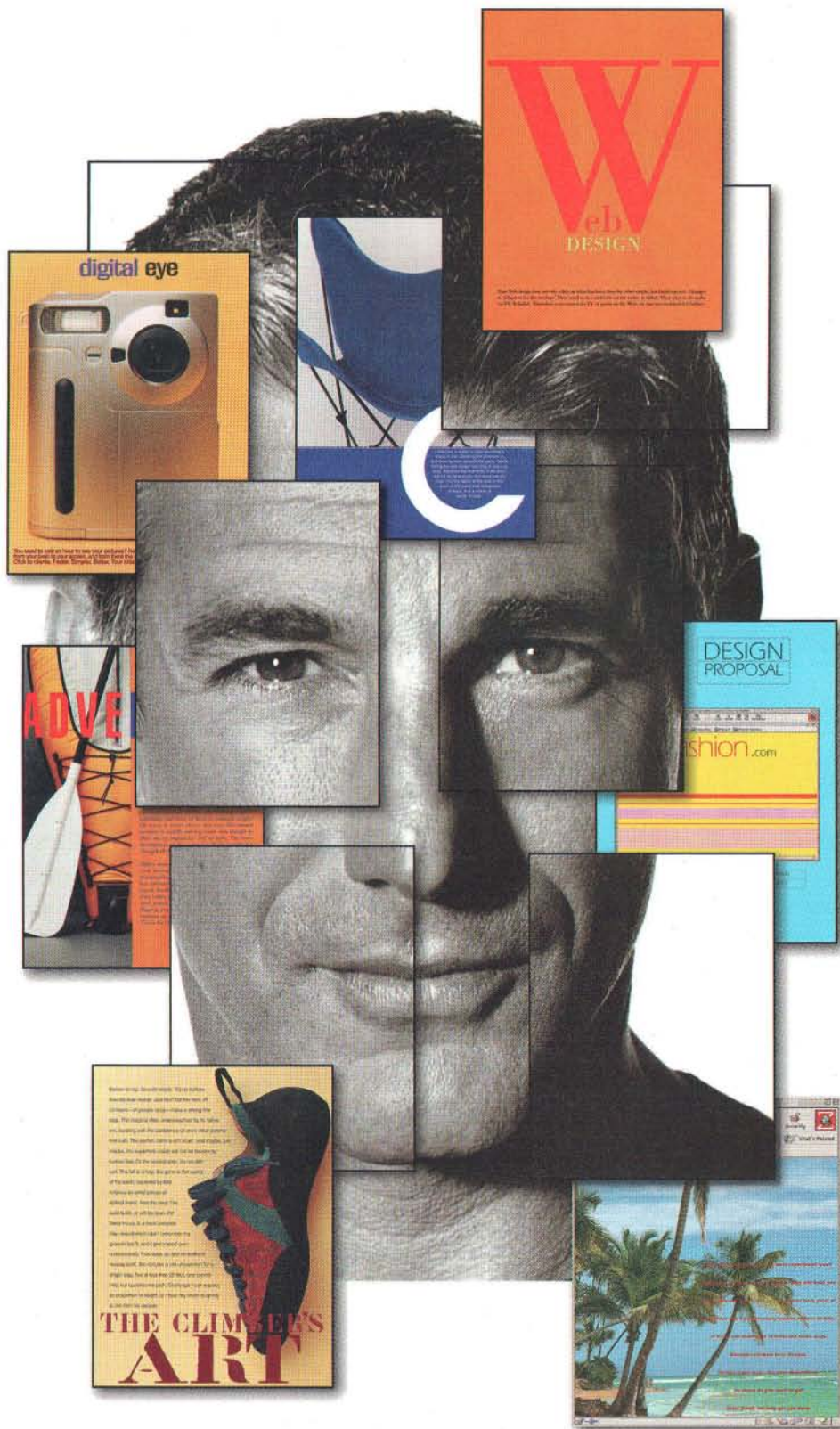
SWINGING MONKEY-STYLE from certain ceiling textures is an absolutely essential skill to learn.

tosh adventure—but Tomb Raider groupies should beware. If you have the other games in the series, this one doesn't offer much more. —Frank O'Connor

good news: Sprawling and inventive sequel. Improved graphics. New moves. **bad news:** Engine needs complete overhaul. Lara looks more anachronistic with every outing.



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Guitar: Method 1

COMPANY: eMedia

CONTACT: 888-363-3424 or 206-329-5657,
http://www.emediainmusic.com

PRICE: \$59.95 (SRP)

REQUIREMENTS: 68020 processor or faster, OS 7 or later, 4MB of RAM, 18MB of free hard disk space, CD-ROM

Raise your hand if, in your closet, sits a dusty guitar you keep *meaning* to learn to play. In a simple yet effective format, eMedia's *Guitar: Method 1* interactive tutorial gets you started.

The practice songs and exercises that comprise the 60 lessons on the CD seem best suited for an acoustic guitar, though you can use any kind. Instruction tools include an adjustable metronome, a Frettrone (a metronome plus an animated fretboard), video clips showing correct fingering, and audio that correctly plays what you're trying to strum.

Lessons in the first three chapters teach basic chords and techniques. Chapter four

OceanLife: Hawaiian Islands, 2nd Edition

COMPANY: Sumeria

CONTACT: 415-586-3820, http://www.sumeria.com

PRICE: \$49.95 (SRP)

REQUIREMENTS: Power Macintosh 100MHz or faster, Mac OS 8 or later, 12MB of RAM, thousands of colors, 4X CD-ROM

OceanLife: Hawaiian Islands reminds us of the days when educational CD-ROMs were little more than bins of QuickTime movies. The main draw of this program is David Fleetham's stunning underwater video photography, which has appeared on the cover of *Life* magazine and in *National Geographic*.



THE VIDEOS ARE SPECTACULAR, but we've seen better interfaces.

Unfortunately, the awkward interface presents almost nothing beyond a transcript of the video clips' narration. There's no mention of species beyond those in the video clips, so when the narrator says, "The green sea turtle you see is now the most common sea turtle in the Hawaiian islands," what's he comparing it to? The application's menu bar—meant to appear only when you move the mouse outside the program window—often simply flickers or remains dark. We encountered a variety of lesser interface glitches—there's no visual cue indicating when the navigation buttons are nonfunctional, and paging text stutters the audio.

For \$50, we simply expect more.—*Ian Sammis*

good news: Great underwater photography.
bad news: Interface blows harder than a puffer.



Puzz 3D: The Orient Express from the Twenties

COMPANY: Wrebbit

CONTACT: 800-973-2248, http://www.wrebbit.com

PRICE: \$19.95 (street)

REQUIREMENTS: PowerPC 120MHz or faster, 32MB of RAM, 50MB of free hard disk space, 640 by 800 color display, 2X CD-ROM

If you're hell-bent on solving a three-dimensional puzzle on the Mac, then check out *Puzz 3D: The Orient Express from the Twenties*.

In some ways, computer puzzling is efficient. You can create trays to sort pieces of



IT'S JUST WRONG. In this scene, a sultry Italian fascist attempts to seduce Albert Einstein to exploit his theory of relativity.

like color quickly. Pieces that fit snap together; pieces that don't fit repel each other. The reward for finishing a puzzle level is a tour through the Orient Express. The more levels you complete, the more cars you can visit. Impressive 3D graphics stay historically true to the train's look—right down to the Lalique glass paneling. Plus a good number of video clips narrate the history of La Compagnie des Wagons-Lits, which built the Orient Express.

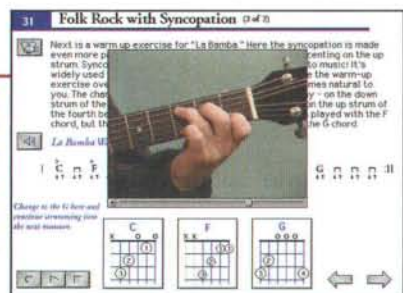
Regrettably, the more levels you complete, the more ridiculous the storyline gets. Gypsy clairvoyant Madame Sosostri guides you through a Mah-Jong fortune-telling game, which unfolds the plan of two Italian fascist passengers to kidnap fellow passenger Albert Einstein. Luckily, amateur detective Wendy Richmond is on the case.

Our advice is to focus on solving the puzzle while ignoring the story.—*Narasu Rebbapragada*

good news: Engaging puzzle. A little history lesson.
bad news: Confusing gameplay. Ludicrous storyline and acting.



THE WARM-UP EXERCISE for "La Bamba" is harder than it looks.



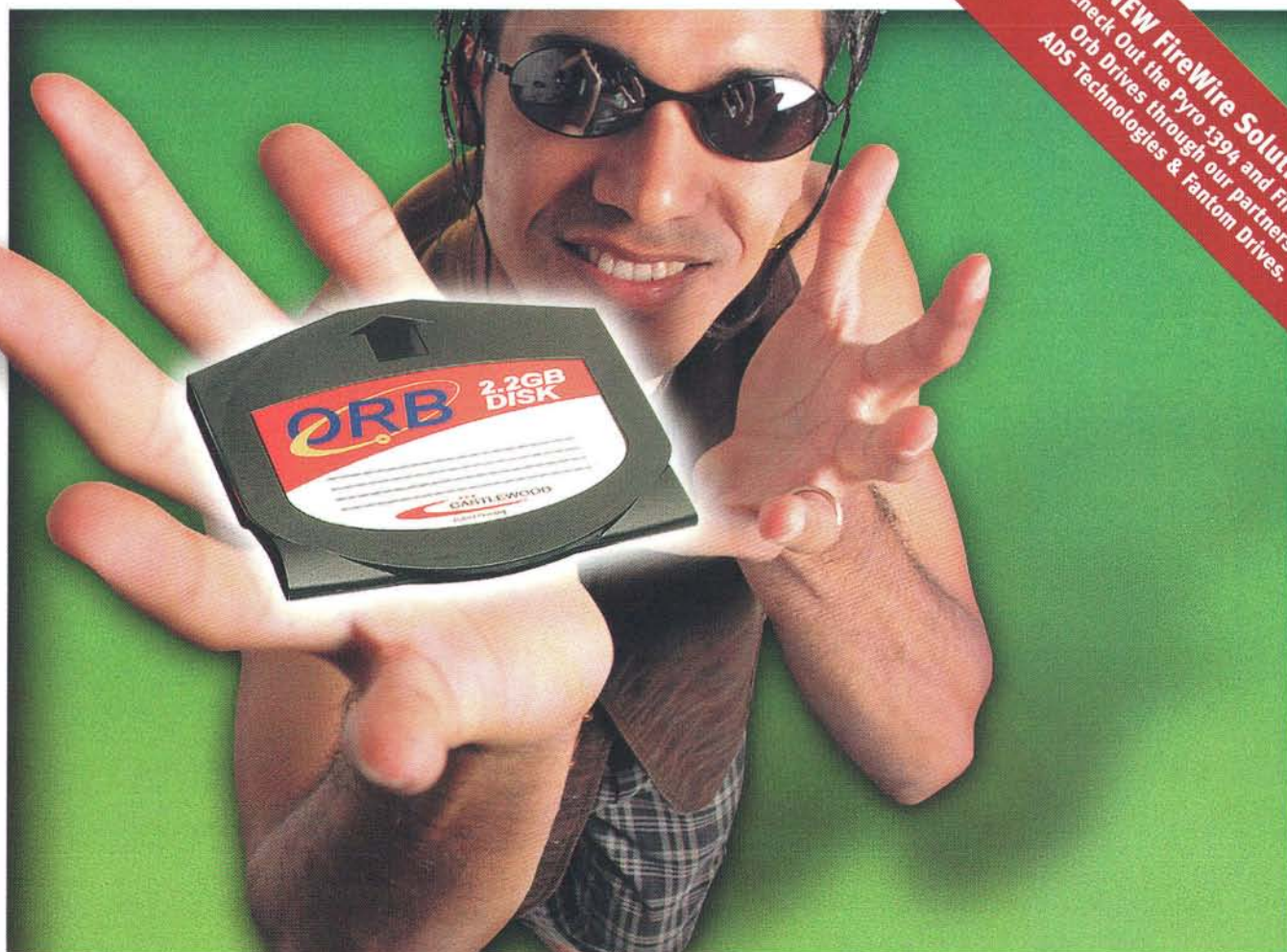
gets more interesting with syncopated folk rock. In chapter five, you'll start picking melodies and learning rhythmic notation. In the sixth and final chapter, you'll experiment with fingerpicking. Practice songs span folk, country, blues, and classic rock. During some exercises (such as palm muting), you'll wish you had feedback from a live person.

Sixty bucks is a lot to pay, but if it makes you pick up that guitar, it's worth it.—*Narasu Rebbapragada*

good news: Comprehensive instruction. Variety of music.
bad news: Pricey. You can't consult a human.



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Diving into Driver

In MacSoft's Latest, You're a Wheelman for the Mob

The next time you're stuck in traffic behind the wheel of your '93 Honda Civic, think about this: You *could* be an undercover cop behind the wheel of a souped-up muscle car, driving for the mob—fast and furious. Of course, you'd probably get shot pretty quickly, but that's why there's *Driver*. The latest release from MacSoft (which should appear on shelves a few weeks after you read this), *Driver* debuted as a console game a little over a year ago, and more recently as a PC release. It's finally on the Mac, and it was worth the wait.

In *Driver*, you play an undercover cop who infiltrates the mob by posing as the best driver around—whether it's for getaways, chases, or "enlightening" business owners reluctant to see your employer's side of things. But the game isn't as simple as jumping in the driver's seat and taking off—first you have to pass the mob's driving test in an underground garage. Be warned: It's *not* easy. Practice first—a lot. Once you're hired, your mob bosses send you out on various missions. You'll need to complete the first job before moving on to the next, and so on.

The game's physics model is convincing, and driving your tricked-out ride takes some skill building. You'll need to master burnouts and skids, and you'll also find that the emergency brake and the reverse gear are your best friends. While you play, the game will offer you the chance to drive through one of four cities: Los Angeles, Miami, New York, or San Francisco, and while each map includes some graphics from its namesake city, the maps definitely *aren't* accurate. They *sure* are fun, though.

Driver is one of those games that will take over your life for a little while. It's easy enough to get into, but difficult to master. Besides, you can use it to blow off a little steam after a particularly difficult commute.—DR



FIND A COPY
of Firefall 2.0
on The Disc.



TELL US
YOUR
harrowing
mob-driving
tales at
[http://www
.macaddict
.com/debate](http://www.macaddict.com/debate).

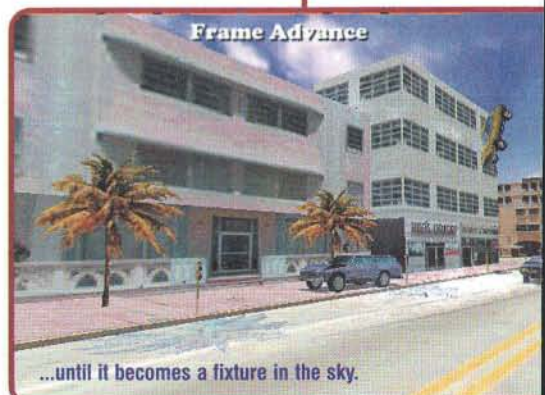
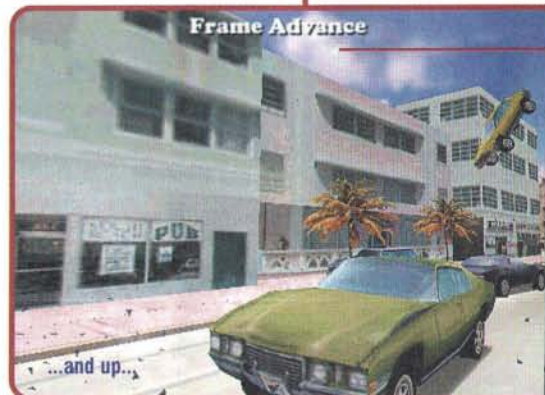
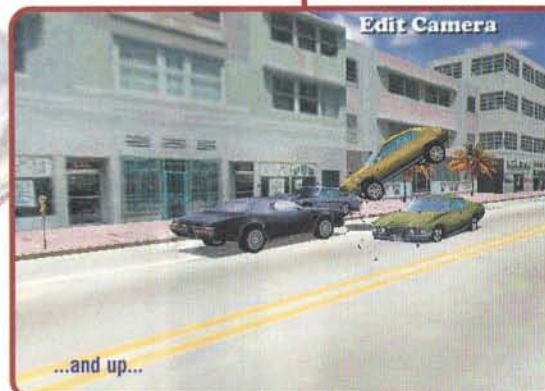
GETAWAY GURUS

The MacAddict Staff Shares Its Driver Tips

Rob Stay in the middle of the road to avoid traffic and roadblocks.

Ian In *Carnage*, you can "launch" a car by ramming it against the side of a building. Go back to the film at the end of a movie you create in Director mode and look straight up to see just how high the cars get! There's also a sweet spot right at the center of a police barricade where you can pass through without much damage or loss of speed.

Chris Handle your high-speed turns with the emergency brake. Imagine your ride is a big ski that you have to slide into each turn. Start your skid at a distance dependent upon your speed (and the surface you're on). Remember to start your slides *wide* when driving fast! You have to play it like the big beefy boat it is! Apply the emergency brake for just a moment to get into the skid. Remember to correct your steering: Initially turn your wheels in the direction you are sliding so you don't just spin out. When your forward speed is greater than your lateral speed, you can straighten the wheels out. As you slide into alignment with the road you are turning onto, floor it to retain speed and control. Finally, apply the emergency brake as needed to keep you on track through the finish of the turn. It's a real gas when you can start a skid at 80 miles per hour and snap right into a skinny alley or bridge without so much as messing up your paint job.



You'll Fall for Firefall

If You Don't, You May Be Dead

It's a wonder someone didn't think of this before—combining the classic arcade hits *Millipede* and *Galaga* with a throbbing disco soundtrack and flashy, colorful graphics. Now we can rest our already overworked synapses, because Pangea Software has done our thinking for us with the release of *Firefall*, an addictive combination that gets the balance just right. (*Firefall* originally came out in 1993, and Pangea has rereleased it.)

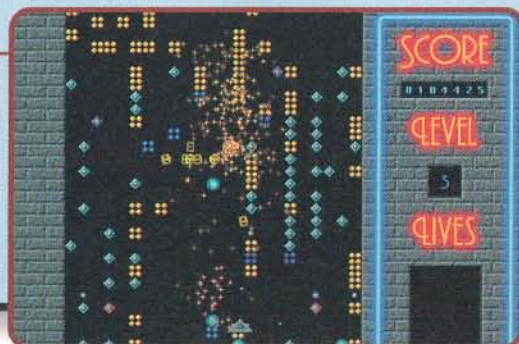
In some ways, launching *Firefall* is like stepping into Studio 54 in its heyday (minus the sex, drugs, and dancing, of course), complete with

neon effects and disco beat. Your objective in the game is to prevent the centipede-like string of objects criss-crossing the top of the screen from reaching the bottom of the screen and running into you. By destroying enough of these critters, you earn the right to try for extra points in the bonus rounds.

Firefall is a pretty straightforward *Millipede* clone, but with better graphics. If you just can't wait to give it a try, you can grab it off The Disc. If you like *Firefall*, do pay for it—it's only \$10. For more information, visit Pangea Software at <http://www.pangeasoft.net/firefall/index.html>. —DR



IN FIREFALL, YOUR MISSION in life is to prevent the marching thingies from reaching the bottom of the screen. Do this enough times, and you get to play the bonus round—à la *Galaga*.



Mac Gaming Houses Bunch Up

New Collective May Mean More Mac Games in Stores

If you've wandered into the "store within a store" in your local CompUSA during the last year or so, you know that finding a copy of a game by a minor Macintosh developer on the shelves is a sighting roughly comparable to seeing a spotted owl engaged in a heated chess match with Elvis. In an attempt to make buying Mac-first or Mac-only games a bit easier, five longtime Mac developers (Monkey Byte, Freeverse, Delta Tao, Green Dragon, and A-Sharp) have teamed up to form Bunch Media. These folks are responsible for such games as *Blood Pong*, *Burning Monkey Solitaire*, *Spaceward Ho*, *Battle-Girl*, and *King of Dragon Pass*.

According to representatives of the companies involved, Bunch Media is similar in concept to *Gathering Of Developers*—it lets its constituent companies continue to develop and support software independently, but gives retail distributors a single large entity to deal with. The constituent companies hope the combination will be their ticket back into retail stores. They also hope to share their strengths (Monkey Byte's online store, Green Dragon's infrastructure, Freeverse's and Delta Tao's relatively large software libraries, and so on). Everybody's favorite bug-munching marketing maven, Jason Whong, will head the new company—as you might remember, Whong promised to eat a real live bug for every virtual bug found in one of Ambrosia Software's products. The eating is scheduled to commence at July's Macworld Expo in New York. —IS



Screen Shot of the Month

Another brilliant *Unreal Tournament* screen shot makes it into this month's hallowed "Screen Shot of the Month" slot. Amazing how a great game tends to produce great images. If you think your screen shot has what it takes, send it to letters@macaddict.com.



Artist's Statement

I took this shot during a Capture the Flag single-player match in *Unreal Tournament*. Ouch! I wonder what other unusual methods characters can employ to carry the flag? Happy fragging! —Matteo Cerasoli

how to

Bringing you advice on Quark freebies and on sharing other people's printers.

Use QuarkXPress Freebies

by Elyse Chapman



What You'll Need

- Mac OS 7.6 or later
- QuarkXPress 4.1



This stuff's for the pros.



It'll take some effort, but you can do it.



The fundamentals, if you will.



FIND A QUARKXPRESS 4.1 demo, a Quark how-to file, Badia Vistas XT 1.0, David's Place XT 1.0, and a FullMeasure XT 2.5 demo on The Disc.



SHARE YOUR BEST JABBERS (or at least your best comments) at <http://www.macaddict.com/debate>.

When you first got your copy of QuarkXPress 4.1, chances are you threw the CD in the drive, updated or installed Quark, and put the CD up on a shelf. If you did, head back to that shelf—you'll find a bunch of cool, free XTensions on the QuarkXPress 4.1 updater CD that most people completely overlook. Some of these XTensions automatically install when you run the 4.1 program updater, but others are waiting for discovery in folders labeled "3rd Party" and "Freebies" at the root level of the CD-ROM. If that weren't confusing enough, Quark put a few more free XTensions on its Web site (<http://www.quark.com>).

A huge number of XTensions are available; we'll show you the best of the best and leave you to explore the rest. You'll find documentation for most of these XTensions in "A Guide to QuarkXPress 4.1.pdf," hiding in the English folder, which itself hides in the CD's Documents folder. Just drop the XTensions into your Xtension folder and have fun!



Super Step & Repeat

Super Step & Repeat goes far beyond Quark's tired old Step & Repeat feature. While it can certainly create multiple duplicates of an item, it also allows you to lighten or darken object fills or blends; increase or decrease frame width; and scale, rotate, or skew objects. Better yet, you can perform any or all of these in a single step. Super Step & Repeat can carry out its transformations

relative to an object's top, center, bottom, left and right sides (and to combinations thereof) or to a specific point. Here we'll show you how to make an innocuous teardrop shape into a beautiful floral design. We've put a QuarkXPress document (named Super Step & Repeat) showing this example on The Disc, so feel free to play along!

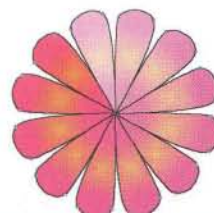
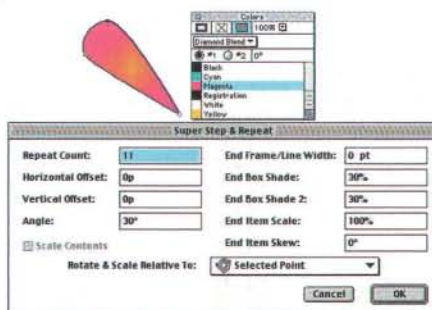
1 Select the Point

When you open the sample file, you should see a single teardrop shape on the left and a completed floral design on the right. Select the teardrop shape on the left by clicking it, then click its sharp point to select that. You want to duplicate and transform the shape relative to this point.

2 Spin the Teardrop

Select Super Step & Repeat from the Item menu, then enter the values as you see them in this dialog box. Click OK when you're done and you should end up with a flower graphic just like the completed one on the right half of the tutorial document.

BY ROTATING THIS TEARDROP around its point, you can create an attractive floral image.



USE THESE SETTINGS TO FAN the lone teardrop shape into a flower, showing a steady loss of contrast around the petals.

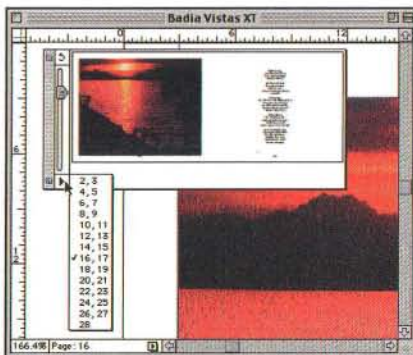
Badia Vistas XT

Badia Vistas XT is a simple, elegant tool for navigating through your documents, adjusting view percentages in real time and quickly jump-

ing from one page or spread to another. Here are two good Vistas XT tricks for your perusing pleasure.

1 Jumping About

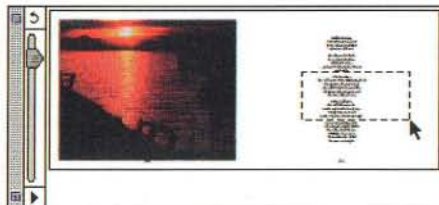
To jump from one page or spread to another, use the pop-up menu at the bottom of the palette. The QuarkXPress Document Layout palette and the page pop-up menu at the bottom of the document window will also take you from one page to the next.



THIS POP-UP MENU is the Quark equivalent of rapid transit—the quickest way to get from one place to another.

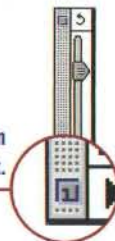
2 Zooming Around

To zoom in on a specific portion of a page, draw a marquee around that area in the Vistas palette. This is a lot faster than schlepping to the tool palette to change tools and even faster than pressing the Control key to turn your pointer temporarily into the Magnify tool. To jump back and forth between the previous and current view percentage, click the back arrow at the top of the palette. To center a specific part of a page in the document window, click that part in the palette. If you don't want to lose space to the thumbnails, click the zoom box to hide them.



DRAWING MARQUEES in the Vistas palette is a superfast way to zoom in or out.

WHEN YOU DON'T NEED the thumbnails, you can hide them by clicking the palette's zoom box.



Type Tricks

Type Tricks is not new to QuarkXPress 4.1 (many of its features have been around for years as parts of other XTensions), but often people don't know about them. Although the 4.1 updater CD doesn't include Type Tricks,

Quark makes it freely available at <http://www.quark.com>. With Type Tricks, you can manipulate price, fraction, and underline styles; check for text flow problems; and manipulate the tracking to fix any problems you find.

1 Number Tricks

Type Tricks provides two powerful features for formatting numbers: Make Fraction and Make Price. To use Make Fraction, type a fraction such as 11/16, select it, and choose Make Fraction from the Type Style submenu of the Style menu. Voilà! You have a more attractive, unambiguous fraction. Make Price works similarly: Type a price such as \$828.58, select the price, and choose Make Price from the Type Style submenu of the Style menu. You can customize both XTensions (by specifying the exact positions and sizes of the fraction's numerator and denominator, for example)—just choose Fraction/Price from the Preferences submenu of the Edit menu.

11/16

— Before applying Make Fraction

11/16

— After applying Make Fraction

MAKE FRACTION IS ABOUT AS SIMPLE as it gets—just select a fraction, choose Make Fraction, and you're done!

\$828.58

— Before applying Make Price

\$828.⁵⁸

— With Delete Radix and Underline Cents off

\$828⁵⁸

— With Delete Radix and Underline Cents on

DEPENDING ON HOW YOU LIKE to see your prices, you can use a fair number of styles.

2 Word Space Tracking

Word Space Tracking is another handy Type Trick. Word Space Tracking tightens or loosens the space between words in selected text (it fiddles with the kerning on spaces). To use Word Space Tracking, hold down the Control key while typing the keyboard commands you'd use for tightening and loosening standard kerning and tracking (Command-Shift-left bracket for tightening, Command-Shift-right bracket for loosening). To give Word Space Tracking a try, select several words in a line of text and press Command-Control-Shift-left bracket. Try it again, adding the Option key, and you'll see the spaces shrink in smaller increments.

Tracking fits text to the available space
Tracking fits text to the available space
Tracking fits text to the available space

AS LONG AS YOU DON'T GO OVERBOARD, you can fiddle with the tracking to eat up or free up space as needed.

3 Cleaning Up the Mess

If you want to remove all the Word Space Tracking effects as well as any individual kerning you've done, Remove Manual Kerning is the perfect tool. Select the text from which you want to remove all kerning and Word Space Tracking, then select Remove Manual Kerning from the Utilities menu.

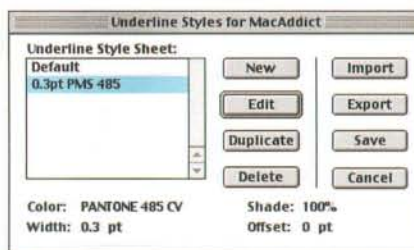
REMOVE MANUAL KERNING can clean up the incredible textual messes you can create with kerning and tracking tools.



4 Underline Fun

If you need to underline text and want more control over the look of the lines, Type Tricks offers the Custom Underlines feature, which hides in the Edit menu. Here you can specify color, shade percentage, width, and offset (absolute or relative, positive or negative—similar to XPress's paragraph rules). When the dialog box appears, click New to create a new style, Edit to fiddle with an existing one, and so on—the buttons do just about what you'd expect based on their names.

You can experiment with the two underline styles in the Super Step & Repeat tutorial file on The Disc. You might find a thin, 0.3-point underline style like the one in the tutorial document useful for tab characters in fill-in-the-blank forms.



TO START CREATING a new underline style, click New.

don't go there!

HERE'S A NICE, TASTEFUL red underline.

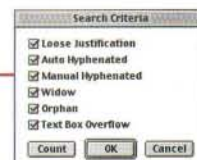
5 Line Check

One Type Trick you simply don't want to miss is Line Check. This searches your document for text box overflow, widows, orphans, lines with loose justification, and lines ending with a hyphen. To tell Line Check what to look for, choose Search Criteria from the Line Check submenu of the Utilities menu.

Once you have chosen your search criteria, simply place your cursor within some text and select First Line from the Line Check submenu. To continue searching your document after the first line found, select Next Line from the submenu.



THE CRITERIA DIALOG BOX shows you the litany of woes Line Check can help you fix.



THIS USEFUL BUT BURIED SUBMENU can help you spot a variety of typographical trouble spots.

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Jabberwocky

Jabberwocky is an XTension not every XPress user will find helpful, but it's so much fun to play with that we couldn't resist describing it. By choosing Jabber from the Utilities menu, you can quickly fill a single text box or linked chain of text boxes with amusingly nonsensical (but always grammatically correct) text. This is ideal when you want to try out various paragraph and character settings in your layout before you have real text to work with—Jabberwocky can generate an arbitrarily large amount of text, so you can avoid having to find large chunks of actual text for testing your layouts.

Apple gunned down MacAddict. Three processors telefragged the programs. Linux shabbily gunned down three processors, but two freakin' awesome magazines smashed three chips. MacAddict wrote the program.

Two fast books shabbily telefragged three rather PC-usin' chips.

NONSENSE or Unreal Tournament game—you decide!

1 Choose a Language

To choose a language in which to jabber, choose Jabberwocky Sets from the Edit menu. Jabberwocky comes with five languages, each of which you can modify to personalize the nonsense text a bit.



JABBERWOCKY COMES with five languages, but you can always make more.

2 Better Yet, Make One

For the fun of it, try creating a Jabberwocky set using all the industry technical and buzz words of your company or top client. Make very sure your client or boss has a sense of humor before you show him or her the Jabbered text, though—we take no responsibility for any sudden career changes this might cause.

MAKING A LANGUAGE IN JABBER can be tedious, but the results are usually well worth the trouble.



Free XTensions Galore

Here's a partial list of the other free XTensions you can dig up with a bit of looking.

The XTension	Who Makes It	What It Does
Scissors XT	Quark Technology Partnership (http://www.quark.com)	Cuts lines and Bézier objects drawn in QuarkXPress.
Enhance Preview XT-SE (Special Edition)	Koyosha Graphics of America (http://www.koyosha.com/xt/epxt-se)	Displays high-resolution screen previews of raster (pixel-based) images without storing them within your files, vastly decreasing the required drive space (see "Sneak Preview," May/00, p34, for an example).
Dejavu	Quark Technology Partnership (http://www.quark.com)	Gives you easy access to the last three to ten documents you've worked on; lets you set the default folders of XPress's Open, Save, Get Text, and Get Picture dialog boxes.
Badia FullMeasure XT	Badia Software (http://www.badiasoftware.com)	Extends the Measurements palette, displaying editable fields for several text attributes. Newer, commercial version of FullMeasure XT (\$49.99 SRP) displays fields for working with boxes, text paths, pictures, lines, and guides.
Guide Manager	Quark Technology Partnership (http://www.quark.com)	Lets you create (or remove) a grid of guides, each of which you can place and/or lock precisely.
Pasteboard XT	Markzware (http://www.markzware.com)	Lets you customize the pasteboard size if you find XPress's top and bottom pasteboard areas too skimpy for your needs. Older versions had the nasty habit of making documents inaccessible to non-pasteboard users—the current version has fixed that problem; you can cure older files of their pasteboard-dependency problems with a variety of XTensions, including Pasteboard XTerminator and PBFixer XT (both come on the Quark CD).
David's Place XT 1.5	Jintek (http://www.jintek.com)	Adds a Place command to the File menu that lets you place text or graphics and create the appropriate container in a single step.
MIS Font Collector	Meadows Information Systems (http://www.meadowsinfo.com)	Collects a document's fonts to a folder you specify (probably the same one you used for Collect For Output before sending a job to your output bureau).
FontWizardXT	Wizard Software	Lets you embed all of a document's fonts when you save your XPress page as an EPS file—with the fonts embedded, you can print that EPS file from any Mac regardless of whether it has those fonts installed.

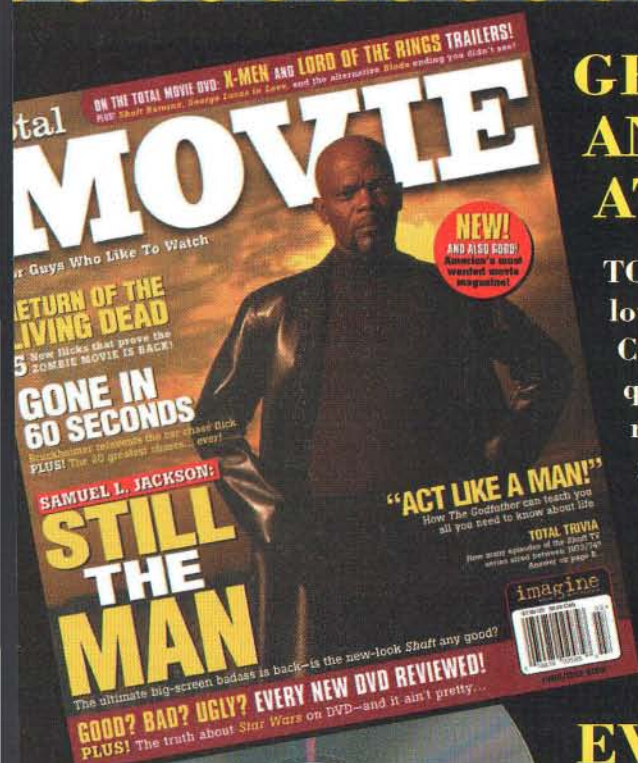
Elyse Chapman (elyse@compuserve.com) is a graphic designer, publishing industry consultant, and Quark Authorized Trainer. She has over 26 years of experience in the publishing industry and is a managing sysop on CompuServe's Publishing Forums.

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Share Your USB Printer

by David Reynolds

TRICKY



COME TELL US about your wild printer-sharing parties at <http://www.macaddict.com/debate>.

What You'll Need

- A printer compatible with Apple USB Printer Sharing software (there's a complete list at <http://til.info.apple.com/techinfo.nsf/artnum/n86054>)
- Two or more PCI-based Macs connected via Ethernet or AirPort
- Apple USB Printer Sharing 1.0 software (downloadable from <http://asu.info.apple.com/swupdates.nsf/artnum/n11726>)
- Printer drivers for the printer your Macs will share
- Mac OS 9 or later
- AirPort 1.1 or later for wireless printing

It's good to share. We blame PBS and its big purple dinosaur for this bit of cottoncandy propaganda, but there's no denying it—that's the plain truth when it comes to printers. Thanks to some slick work by some unnamed Apple engineers, we have Apple USB Printer Sharing 1.0 to back up this truth. With this bit of software, you can share your USB-based printer with others on an Ethernet network.

You'll need two or more Macs to perform this minor miracle—each will play a different role. One Mac acts as a host computer, while all the other Macs sharing that printer are clients to that host. The host selflessly donates some of its CPU time to handling print requests, grabbing them from the network, and passing them on to the printer via its USB connection.

It's not much of a sacrifice—the host computer will hardly notice this interaction. (Still, it's not a good idea to use your host machine for burning CDs or other jobs that totally monopolize its CPU.)

Here's how to use USB Printer Sharing to share your USB printer with friends and family. But don't expect any thanks—sharing should be selfless, remember?

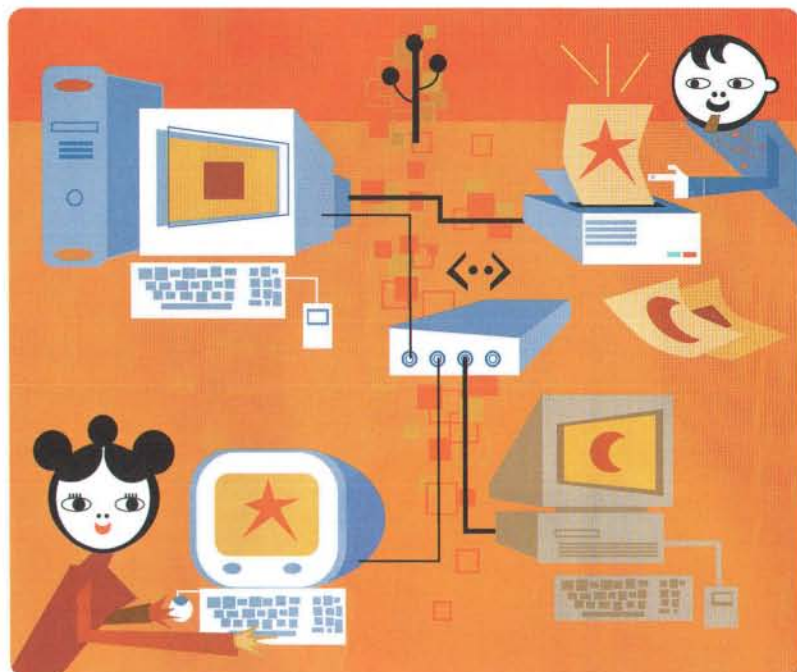
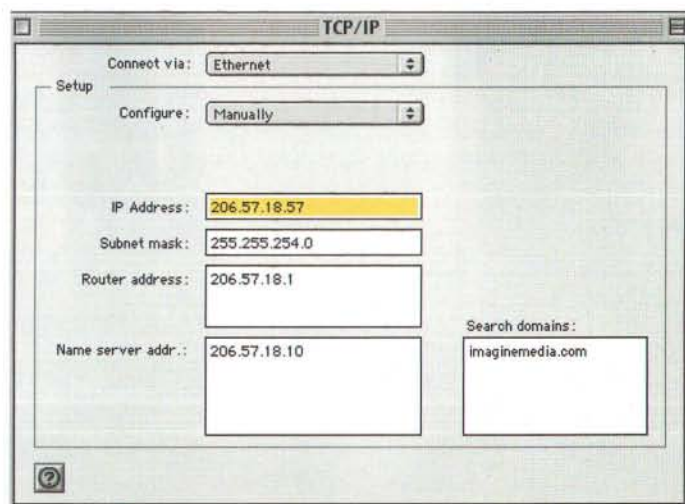


ILLUSTRATION BY CLAUDIA NEWELL

Take Care of Connections

Before you get started installing, you have to make all of the appropriate hardware connections. Fortunately, if you want to share a printer, you've probably made those connections already. First, you have to connect the USB printer to the Mac acting as the host computer—just plug the printer into the Mac's USB port or a USB hub connected to the host Mac. Next, you need to connect your Macs via Ethernet, which you can do with a standard hub network or crossover cables. (You can also use an AirPort connection.) Finally, your Macs have to communicate via TCP/IP, which means that each Mac needs a valid IP address, whether it's a static address or one assigned by DHCP.

Also take note of the domain name listed in the Search Domains field—you'll need this information later when you go looking for your shared printer.



USING A MANUALLY ASSIGNED IP address is one way to get your Macs talking over a network. Think of it as a network phone number. Also take note of the item in the Search Domains field—you should probably write this down, as you'll need it later.

Tip

For more information on getting TCP/IP to work on your Mac, see Apple's Tech Info Library at <http://til.info.apple.com/techinfo.nsf/artnum/n30999>.

2 Install Your Drivers

The next step is to make sure each Mac that's going to share the USB printer has the printer's drivers installed. The drivers should have come with your printer—follow the manufacturer's instructions to install the drivers on each client Mac. You should also install the drivers on the host Mac.

YOU STILL NEED the printer drivers on each client Mac to print. Yes, we know the Epson Stylus Photo 870 drivers already allow printer sharing, but the USB Printer Sharing software lets you share an 870 under a greater range of circumstances—for example, with AirPort.



3 USB Printer Sharing Installation

After all of the Macs have the shared printer's drivers installed, it's time to install the magical bit of software that will fool each client Mac into thinking it has a USB printer connected to its USB port. You'll be installing this software on each Mac sharing the printer—host and client alike.

Download the Apple USB Printer Sharing disk image from <http://asu.info.apple.com/swupdates.nsf/artnum/n11726> and double-click the disk image to mount it. Open the disk image and then double-click the Installer icon—after reading the About USB Printer Sharing file, of course. Say yes to a license agreement, then you'll face an installation screen. Leave it set to Easy Install. From the pop-up menu, select the disk where you want to put the software (this disk must have Mac OS 9 or later installed), and click Install. Restart your Mac when the process finishes.



INSTALLING THE USB Printer Sharing software is easier than falling down. Just run Easy Install, restart, and you're done.

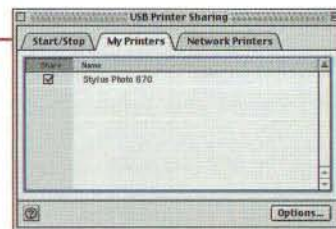
4 Set Up the Host

Setting up the USB Printer Sharing software on the host Mac (the one with the printer attached) is a two-part process. First, open the USB Printer Sharing control panel and select the Start/Stop tab. Click the Start button in the lower left corner, which will start the printer sharing process. (The button will read Stop once things are rolling along.) Next, click on the My Printers tab and select the check box next to the printer that appears in the window. You're all done with the first part of the process—close the control panel window. You can find the printer by its name in the My Printers tab or by the name of the host Mac, which you set in the File Sharing control panel.



CLICK THE START button to get the ball rolling—and don't worry about the Not Available message in the IP Address area. Once you've started sharing, the correct information will show up here.

SINCE YOU COULD CONCEIVABLY HOOK UP dozens of USB printers, you need to pick which ones you want to share.



Some Restrictions May Apply

Although Apple named the software USB Printer Sharing, not every Mac with USB can take advantage of it. In order to share a printer using USB Printer Sharing, the host computer must have built-in USB: USB PCI cards and PC cards will not work. Client Macs don't need to have USB, unless the shared printer is a PostScript printer, in which case the client Mac must also have built-in USB. Finally, the Macs have to be able to use TCP/IP, because USB Printer Sharing doesn't support AppleTalk. Go figure.

If you're using a client Mac without built-in USB, you may run into some trouble getting this whole dog-and-pony show to work. If you do, you may have to install the USB components from your Mac OS 9 CD. To do this, run the Mac OS 9 installer, do a custom installation, and check just the USB option in the Network And Connectivity category. This should install missing USB components that some printer drivers require, whether or not the client system actually has USB.

5 Set Up the Clients

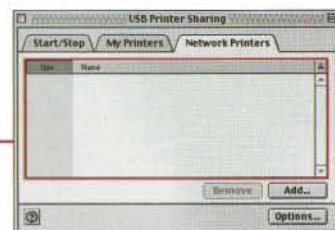
Setting up the USB Printer Sharing software on the client Macs is a little more involved, but not hopelessly so. It's a four-part process, and we think you can handle it, since you've shown such promise and we value you as an employee—er, reader. You'll need to do this step on each Mac you want to set up to share the printer. Start by opening the USB Printer Sharing control panel on the client Mac, selecting the Start/Stop tab, and clicking the Start button in the lower right corner of the window. Next, click the Network Printers tab, which will reveal an empty window. To add your shared printer to this window, click the Add button in the lower right corner, which will bring up a network browser.

Remember that item in the Search Domains text box we told you to take note of in the first step—the one in the TCP/IP control panel? You'll need it now. Click the reveal triangle to the left of that domain name, and your shared printer will appear below that item. Select it, then click Choose. This will close the window and bring you back to the main USB Printer Sharing window, where your shared printer will appear after a short delay. Make sure that the check box next to the printer's name is checked, then close the control panel.



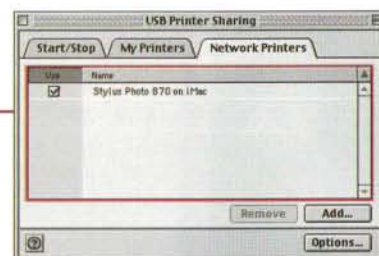
LOOK FAMILIAR? It should. The Stop button in the lower left corner indicates that printer sharing is already running.

IT'S A GHOST TOWN in these here parts. Clicking the Add button should fix that.



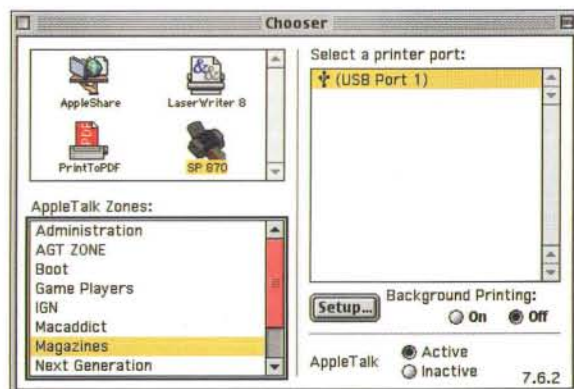
THE NETWORK NAVIGATOR makes an appearance after you click the Add button, and this is where that domain name you took note of earlier comes in handy. You'll find your shared printer under this domain name, *not* in the AppleTalk region.

AH, THAT'S BETTER. Your shared printer now appears in the Network Printers tab. Just check it and close the control panel to finish up.



6 Choose the Printer

Everything's ready to go. Now all you have to do is choose the printer on the client Macs. For non-PostScript printers, open the Chooser, select the printer driver, select the USB port, and then close the Chooser. For PostScript printers, use the Desktop Printer Utility to select the printer. Finally, test the printer by printing to it from the client Mac.



YOU'RE ALL SET—just select the printer driver for the shared printer in the Chooser, select the USB port, and close the window.

David Reynolds recently used a shared USB printer to print a copy of his manifesto, which will soon be on display in his mountain shack.

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Relocate with the Location Manager

by Ian Sammis

What You'll Need

• Mac OS 7.6 or later



SO HOW MANY locations have you created? Wherever you are, come to www.macaddict.com/debate and tell us about it!

It's been a long day at work—you sat for a few seconds in your car just resting before you could even bear to trudge up the stairs to the front door of your house. You're home, though, and you know the perfect way to relax. You dig out that old copy of *Myth II*, throw it into your PowerBook, and connect to Bungee.net.

The connection attempt fails. Oh, yes, that's right—your TCP/IP settings are still set up for your office network; you have to switch to your DSL line. Now there's no sound—your colleagues were about two Sosumis away from garroting you with a spare Ethernet cable—so you have to turn the sound back up to an audible level. As long as you're getting set up for home, you might as well switch your default printer setting as well. By the time you finish getting the machine ready for gaming, you've built up a level of aggravation only a few serious dwarf mutilations will satisfy.

There's a much, much better way. A little-used and strangely organized control panel, the Location Manager, can make changing your settings for home use a simple matter. Just head over to the control strip, pull up the Location Manager's menu, pick Home, and all your settings change at once. Unfortunately, whoever designed the Location Manager was thinking different—way, way different—so many would-be Location Manager users prematurely quit in frustration. Here's how to get the Location Manager to work for you instead of against you.

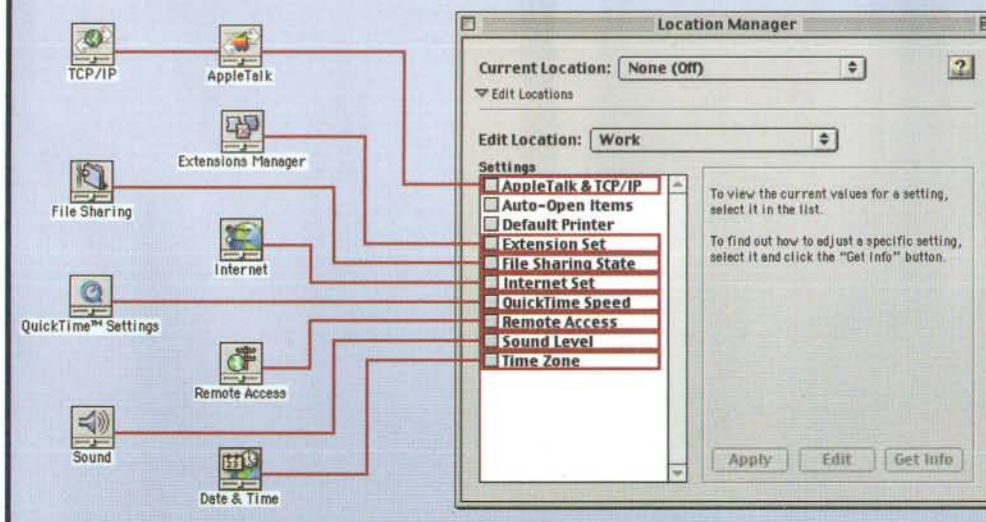


ILLUSTRATION BY JEN GIBAS

So What Is This Location Manager Thing?

The Location Manager is a megaswitch for all those pesky system settings you have to change when you move a machine from one location to another. You can use the Location Manager Control Strip

pop-up menu to change the settings of these nine control panels (along with the default printer) via a single click. If you're in a Rube Goldberg-ish mood, you can also open folders and applications.

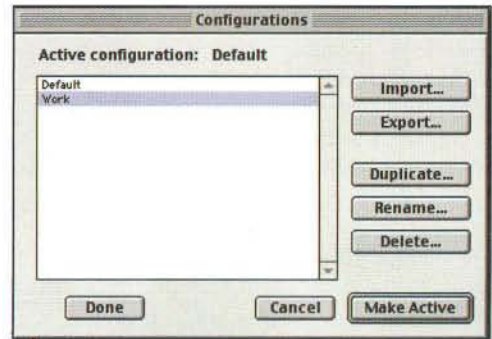


THE LOCATION MANAGER can quickly switch the settings of these nine control panels and the default printer setting. It can also open apps, folders, and control panels when you switch settings.

1 Network at Work

Whenever you move a PowerBook, an iBook, or (if you've got strong arms) a desktop system from one place to another, you have to change your TCP/IP settings. If you want to use the Location Manager to set your TCP/IP settings, you need to do a bit of preparation first. Usually, you simply open the TCP/IP control panel, make your changes, then close the control panel. But the Location Manager doesn't actually store the individual TCP/IP settings—instead, it relies on the TCP/IP control panel's well-hidden ability to create saved configurations. To use the Location Manager to control your TCP/IP settings, you'll need to create separate configurations for each location.

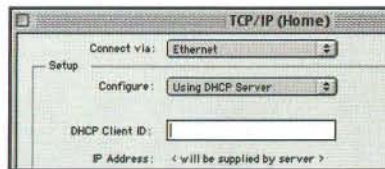
Start by entering the settings appropriate for your office. Next, choose Configurations from the TCP/IP control panel's File menu. Click the Default configuration, then click Duplicate. Name the new setting Work. Click Make Active to make your Work setting the active configuration.



FOR STRANGE AND UNNATURAL REASONS, you can't use the Location Manager to switch to the Default configuration. You'll have to duplicate it first.

2 Network at Home

You'll need different settings when you're at home. Choose Configurations and duplicate the Work configuration. Call the new configuration Home. Make the Home configuration active (you can only alter the active Configuration), and enter the settings you use at home.

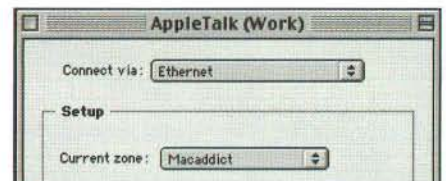


NOW THAT YOU'RE USING multiple configurations, the name of the current configuration appears in the TCP/IP control panel's window title.

3 AppleTalk Madness

At this point you've already saved yourself some time—you can just switch between your Home and Work configurations rather than tediously reentering your TCP/IP settings each time you move your machine. However, you're not quite ready for the Location Manager. For reasons beyond the ken of man (or at least of *MacAddict* editors), the Location Manager ties AppleTalk and TCP/IP settings together and won't let you switch network settings at all if you're using the default setting for either.

Fortunately, there's an easy fix. Open the AppleTalk control panel, and again create Home and Work configurations. The process is exactly the same as for the TCP/IP control panel—when you select Configurations from the Apple Menu, an identical dialog box opens.



MANY PEOPLE STALL OUT HERE—the Location Manager won't let you change TCP/IP settings unless you've also defined AppleTalk Configurations. Again, note the changed window title.

4 Location, Location, Location

Now that we've got configurations set up for both home and work, we can set up locations in the Location Manager. Open the Location Manager control panel and select New Location from the File menu. Name the new location Home.

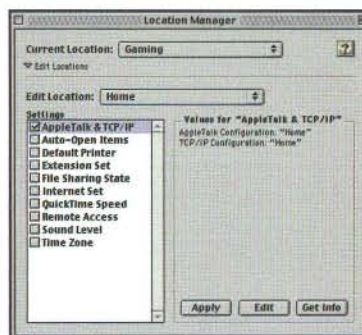
THE LOCATIONS YOU CREATE don't necessarily have to represent physical locations—for example, you could create a gaming location that just ramps up your sound and opens your games folder.



5 Network Switching

Switch the TCP/IP and AppleTalk control panels to the Home configuration settings you created earlier. In the Location Manager, click the check box marked AppleTalk & TCP/IP. You can now switch your network settings to their home values quickly and easily.

Now choose New Location from the File menu again, and name it Work. Set the configurations of both the TCP/IP and AppleTalk control panels to Work through their respective control panels, and again click the AppleTalk & TCP/IP check box.



NOW THAT YOU'VE CHECKED THE BOX, the Location Manager will tell the TCP/IP and AppleTalk control panels to jump to their respective Home configurations when you tell the Location Manager you're at home.

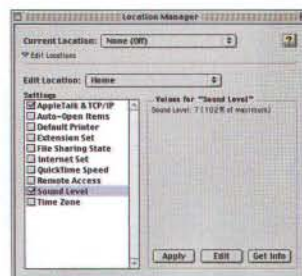


Similarly, switching to Work will change all the network settings back again.

6 Changing the Volume

Although most people use the Location Manager just to change their network settings, it's capable of quite a bit more. For a start, let's set the volume to maximum while you're at home, but mute the sound while you're at work.

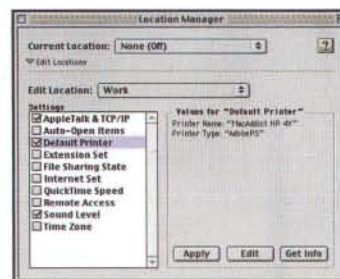
Set the volume to its maximum setting (either in the Sound control panel or from the Control Strip). In the Location Manager, choose Home from the pop-up menu. Click the Sound Level check box. You've now attached the maximum sound level to your Home location. Similarly, drop the volume for your Work setting (a wight explosion can be embarrassing when you're trying to explain why your project is behind schedule).



AS SOON AS YOU'RE AWAY from the delicate ears and finely tuned sensibilities of your coworkers, you might as well crank the volume right up past maximum!

7 Default Printers

Back in the days when your only printing options were AppleTalk and the serial ports, the worst that could happen if you forgot to reset your printer was a message on your screen at home indicating that the printer wasn't responding. These days, if you've got an LPR printer selected, your Mac will cheerfully print your love letters, financial statements, and plans for defrauding the government to your work printer even when you're not there. To avoid this sort of inconvenience, select the printer you'd use at work, choose your Work location in the Location Manager, then mark the Default Printer check box. Do the same for your Home location.

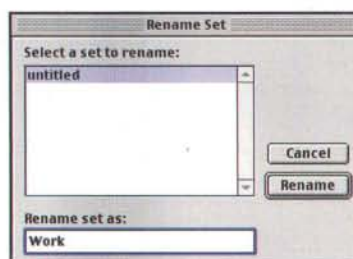


IF YOU ROUTINELY USE MORE than a single printer, you might want to create multiple locations to make switching printers easier.

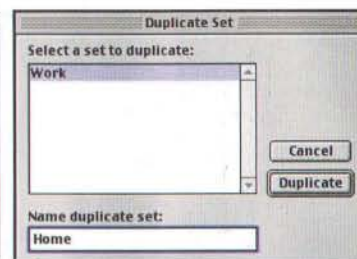
8 Firewall at Work, None at Home

If your office has a strong firewall (a proxy server, not just a router with some packet filtering like IPNetRouter), you're probably going nuts constantly changing your proxy server settings when you move your computer. Fortunately, the Location Manager can handle this, too!

To use the Location Manager to swap firewall settings, you'll need to create two sets of Internet settings. First, choose Rename Set from the File menu and change the name of the untitled set to Work. Next, choose Duplicate Set from the File menu and create a set called Home.



FOR NO APPARENT REASON, the Internet Control Panel calls groups of settings *sets*, not *configurations* as everywhere else. Fortunately, they behave nearly the same way.

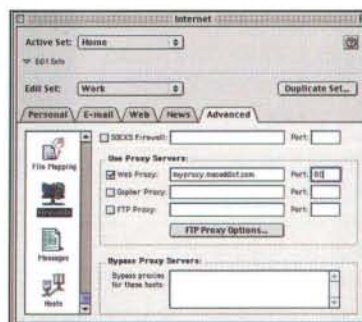


JUST AS WITH THE TCP/IP and AppleTalk control panels, you need Home and Work settings for the Location Manager to switch.

9 Enter the Firewall

Open your Internet control panel. Select User Mode from the Edit menu and set your user mode to Advanced. This will make the Internet control panel display an extra tab named Advanced. The Advanced tab lets you change a variety of Internet settings that otherwise stay hidden, including your Firewall settings. For each set, enter the appropriate Firewall settings.

To add the Home and Work sets to the corresponding locations, first choose a set from the Active Set pop-up menu, then choose Location Manager from the Control Panels submenu of the Apple menu. Make the appropriate location active and check the Internet Settings box.



AS A MATTER OF MACADDICT POLICY, we will laugh hysterically at, but not reply to, emails asking why setting your Web proxy to myproxy.macadict.com doesn't work.

10 Quick Switch

Everything should now be ready! As soon as you get home, all you have to do is go to the Control Strip, click the Location Manager Control Strip module, and choose Home from the pop-up menu. The Location Manager will quickly change all your preferences. Welcome home!



AFTER ALL THAT WORK, switching settings is a breeze—just make a menu selection and you're done!

Ian Sammis is doing something very, very odd with the Auto-open Items feature...

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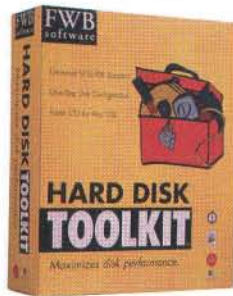
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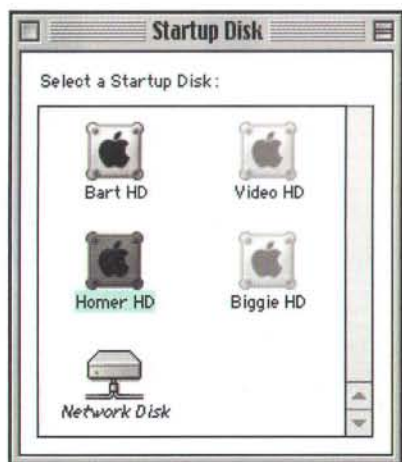
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Questions?

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Q *I really love my new G4, but I noticed something weird in the Startup Disk control panel. It has an item called Network Disk. My old Performa didn't have this option. Did I accidentally install something I should not have installed?*

A What you have stumbled upon, my friend, is a feature Steve Jobs hopes all Mac users will embrace—the Net Boot capability of all the current iMacs and G4s. When you choose the Network Disk in the Startup Disk control panel, your computer will search the network for a Net Boot server (currently available only via a Mac OS X Server) at startup. Chances are your computer is not using a server to boot, so don't choose the Network Disk in the Startup Disk control panel. If you accidentally choose the Network Disk option, your Mac may refuse to start up at all. In this case, simply boot to your install CD by holding down the C key. Then open the startup disk on the CD to change your selected startup disk back to the hard drive.



UNLESS YOU'RE AN ADMIN, chances are you'll probably never need to boot to a network disk.

Q *The computers at my workplace all start up with a custom screen that features the name of the company. How can I do this on my computer at home? I would love to have a picture of my daughter appear on my screen during startup.*

A There are a few ways to substitute a picture for the normal Mac OS splash screen. One way is to hack your actual System File with ResEdit and paste in a replacement. The fine folks over at Resexcellence (<http://www.resexcellence.com>) have lots of these, as well as instructions for creating customized replacements. However, the simplest method is to save the desired image as a PICT graphic file with the name StartupScreen (no quotes and no spaces), then drop it into your System Folder. Restart your Mac, and voilà! Now all you proud parents can show off your little one's picture while your Mac starts up!

Q *I love the new Internet Explorer 5, especially the way you can change the interface colors to match your iMac. It sure would be nice if you could change the spinning E in the corner to a custom icon. I remember this is possible with Netscape, but can you do it with Internet Explorer 5, too?*

A The little animated icon in the upper right corner of your Web browser is commonly called a *throbber*. It serves as an important tool for Web browsing—letting you know when a page has finished loading (the animation stops). It is also an important advertising tool for the Web browser's creator. These throbbers are actually just a series of images animated to create the icon movement. By opening your browser application with a resource editor such as ResEdit, you can see the different images that compose the throbber.

Netscape has always made its throbber with a series of ResEdit icon resources, but Internet Explorer is different. You still need to use ResEdit to make the final change, but instead of creating icons, you create one

large black-and-white image that contains all the animation frames. Using your graphic program, create a file 40 pixels wide by 720 pixels tall. Divide this image into 18 equal sections, 40 by 40 pixels each. Into each of these divisions place the series of images that will make up your animation, beginning at the top.

Once you complete the image, open Internet Explorer with ResEdit. Then copy and paste the image into PICT resource number 165 of Internet Explorer. Save the changes to animate your new Internet Explorer 5 throbber.



YOU, TOO, CAN have a cute little custom icon in your Internet Explorer browser.

Q *My family and I just got a new iMac, and I noticed an odd thing. If you hold down the Option key during startup, a strange screen with arrows on it appears. What is this?*

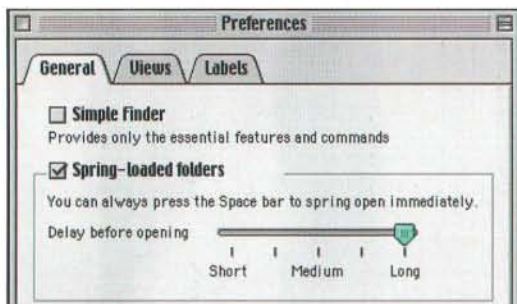
A What you have noticed is a special feature of the new Macs. The only computers that do this are iBooks, slot-loading iMacs, and G4s. Apple based these computers on UMA (Unified Motherboard Architecture). When you hold down the Option key during startup, your computer allows you to select a startup disk. In older Macs, holding down the Option key at startup would close any windows open in the Finder. This new startup disk feature is a welcome addition to the many special startup key combinations. For more information about what various key combinations can do at startup, read your computer's Mac OS Help Center via the Help menu in the Finder.

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Other World Computing	224 West Judd Street	800-275-4576	www.macsales.com	104,105
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Power On Software	420 North Fifth Street, #830	612-317-0344	www.poweronsf.com	53
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Random Eye Technologies, Inc	543 Richmond St West #215	1-800-726-4126	www.randomeye.com	91
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Q *Help, I've lost all my keyboard shortcuts in the Finder! Not only that, but the only item under the Special menu is Shut Down and I cannot create pop-up windows. It was all working fine last week—what happened and how can I get it back to normal?*

A Yikes! What on earth did you do? Limited menus and disappearing key combinations and features can mean only one thing: You have enabled the Simple Finder option. Starting with Mac OS 8, Apple implemented Finder preferences. In the Finder, choose Preferences from the Edit menu. In this dialog box you can choose to have your computer work with Simple Finder. The Simple Finder feature includes only the most basic Finder functions and is intended for new computer users, who may feel overwhelmed by the normal Finder's many menu items. To get your menus back, simply uncheck this option.



DON'T LET YOURSELF get caught in the Simple Finder—make sure you always leave this option unchecked.

Bookmark Blunders

Did you try out the tip from the June *Ask Us* column about sharing bookmarks between Netscape and Internet Explorer by placing an alias from one program's Bookmarks or Favorites file in the other's Preferences folder? For most the trick worked fine, but some people had a few problems, mostly due to simple typing errors. Your best bet when copying an exact file name from one file to another is to use Copy and Paste from the Edit menu. If you select Copy with a file highlighted in the Finder, you will copy the file name to the clipboard, ready for pasting to another file. You can select multiple items in the Finder, copy all of the file names, and paste them into a word processing document—handy for creating playlists of MP3s to print out.

Q *My new Epson 740 printer works great, especially on the included glossy paper. I have a problem printing from Netscape, though—whatever I print comes out in teeny-tiny type. Is my new printer incompatible with Netscape?*

A This little issue has been around for some time. It turns out that the printer and Netscape are compatible, but one feature of the Epson print driver that's enabled by default does not work with Netscape. Of course, each side points the finger at the other, and the issue remains unresolved. There is a simple fix, though. In Netscape, open Page Setup from the File menu and uncheck the Fit To Page If Possible check box—no more itsy-bitsy, teeny-weeny Netscape printing.

Q *While surfing the Web, I find lots of sites with free screen savers you can download. They are usually just promotional advertisements for a company or movie, but they're cool nonetheless. I have found many PC tools for creating customized screen savers, but none for the Mac. Is there a way for me to create my own custom screen saver without having to learn programming?*

A As long as there have been computers, there have been screen savers. In the early Apple II and IBM PC days, the screen saver was a necessity. It actually made monitors (called displays back then) last longer by preventing repetitively displayed images from permanently burning into the actual screen. With the advent of better computers and better display technologies, it has become nearly impossible to actually burn an image into your screen. You would have to leave the same high-contrast image on your screen for years before you would see any burn-in.

So where does this leave the screen saver? Well, today the screen saver serves two purposes, neither of which has anything to do with saving the screen. The first is entertainment. It is just plain fun to have your computer do something without a direct user command. The second is security. Most current screen savers, such as Darkside of the Mac (<http://www.poubelle.com/DarkSide.html>), allow you to set a password, which is thereafter required to bypass the screen saver. There are some commercially available screen savers, but the coolest ones tend to be

the free promotional offerings like the one for the movie *The Matrix* (<http://whatisthematrix.com>). By and large these screen savers are all created with Cinemac or ScreenTime, both from Macsourcery (<http://www.macsourcery.com>). These amazing tools let you create a screen saver from a Director movie, a Flash movie, or even a QuickTime movie. You'll find demo versions of these tools on The Disc; these allow you to create fully functional screen savers that have the limitation of only working for one week.

Q *When I turn on my computer, it always tries to dial my modem and connect to the Internet during the startup process. This is driving me crazy—make it stop!*

A This could happen for a variety of reasons. To track down the culprit, you need to know exactly when your modem tries to connect. If it happens as the extensions and control panels load across the bottom of your screen, you have a misconfigured extension or control panel setting. If it happens as the Finder loads, right before all your icons appear, some item in your Startup Items folder (located in the System Folder) is initiating the connection.

The most common cause for this occurrence, however, is a setting in the TCP/IP control panel. In Advanced User mode, you have the option to check or uncheck a box labeled Load Only When Needed. If you leave this box unchecked, the TCP/IP services attempt to load at startup, prompting your modem to start dialing. To stop the madness, simply make sure you have Load Only When Needed checked.

Another possibility is that you have file sharing selected in the File Sharing control panel of OS 9. With OS 9, Apple introduced sharing via IP, and your computer may be trying to connect with the Internet in order to allow this. Or you may have Web sharing enabled. Your computer would need to connect to the Internet to make Web sharing work, so it may attempt to dial in at startup.

If none of these scenarios describes your situation, you can still stop this undesired connection. Open the Remote Access control panel and uncheck Allow Internet Applications To Initiate Connection.

Buz Zoller is a technology support specialist for a school district in Texas.

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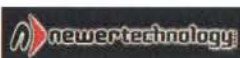
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Building on the features of the enormously popular, number-one-selling notebook in the U.S., the new iBook line comes with twice the memory and hard drive capacity, as well as a new Special Edition model. Plus, Mac Zone is now offering a FREE Epson Stylus 740 Refurbished - a \$110 value - an ideal companion for your iBook.

Besides everything we love about the original iBooks - including the backpackable case, easy Internet access, latch-free closing, convenient carrying handle, 3D-munching ATI Rage Mobility chip, and exciting AirPort Wireless option - all of the new models sport 64MB of RAM (expandable to 320MB) and a six-gig Ultra ATA hard drive.



Plus, the iBook SE features sophisticated graphite accents and is driven by a 366MHz G3 processor.

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iBook Model	Processor	Hard Drive	RAM	Optical Drive	Modem	Ethernet	Ports	FREE PRINTER! **	Display	Item #	ONLY	Lease**
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Tangerine	G3/300MHz	6.0GB	64MB	24X CD-ROM	56K	10/100	1-USB	Yes	12.1" TFT	#116011	\$1594.98	\$57
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Apple DV	400MHz	10.0GB	64MB	DVD-ROM	2 ports	2 ports	Yes	Yes	Yes	#112619	\$1294.98	\$46
Blueberry DV	400MHz	10.0GB	64MB	DVD-ROM	2 ports	2 ports	Yes	Yes	Yes	#112622	\$1294.98	\$46
Special Edition DV 400MHz	400MHz	13.0GB	128MB	DVD-ROM	2 ports	2 ports	Yes	Yes	Yes	#112624	\$1494.98	\$53

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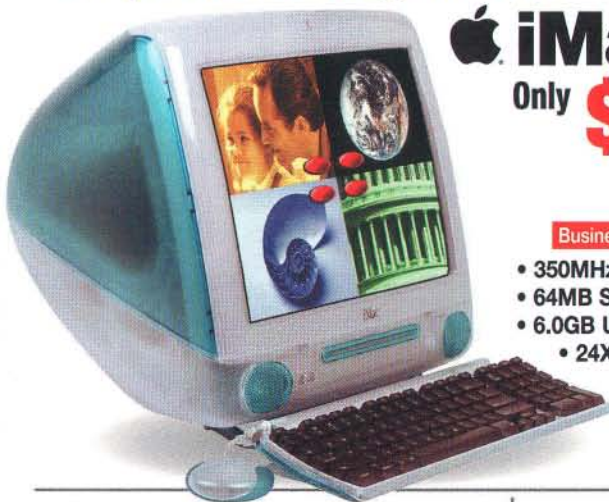
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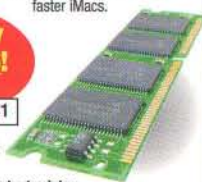
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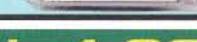


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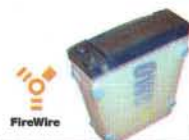
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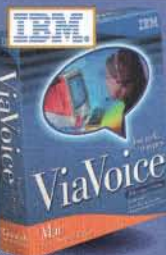


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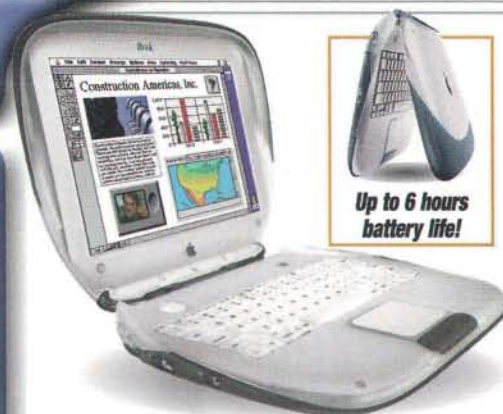
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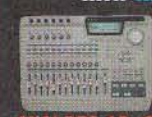
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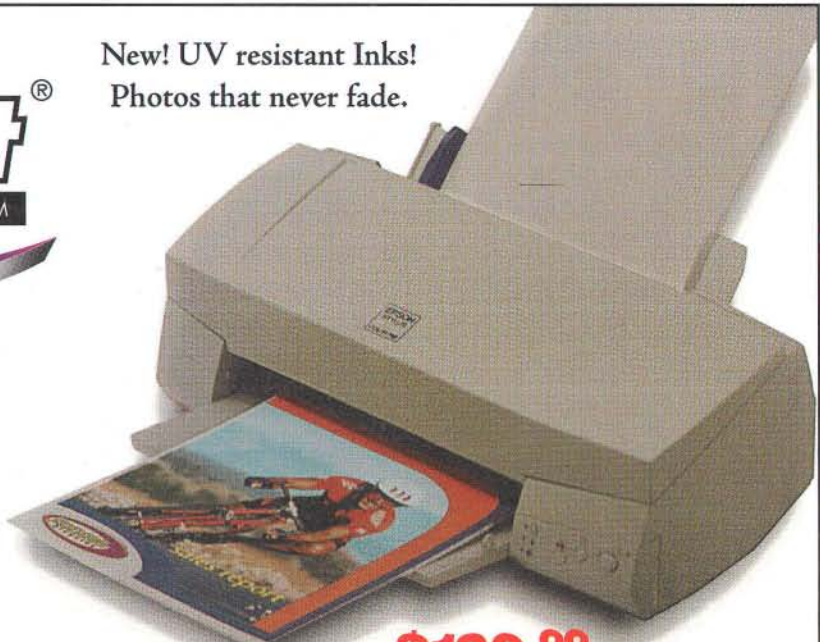
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What're you lookin' at?! I thought so.

iCar



It's been a few months since a Web site offering a parody of Apple's products has been under threat of lawsuit, so we thought we'd get things going. Take a look at the iCar (<http://www.chris3d.com/look.html>), a whimsical impression reminiscent of what might happen if the iMac met an AMC Gremlin. (Our favorite part of the site is the disclaimer at the bottom of the page.) Hurry, though—this site is only good until its creator receives a cease-and-desist order from Apple.

Top 5 Reasons Bungie Agreed to the Microsoft Deal

- 5 Needed inspiration for writing Rampant Als.
- 4 Dwarves just didn't feel like blowing things up anymore.
- 3 They're everywhere!
- 2 Wanted to see whether it was possible to windsurf on cash.
- 1 Needed Microsoft's vast experience with managing vaporware.

TV Guide Listings

Alternate-universe TV Guide listings for a hypothetical day after Apple releases the beta version of Mac OS X.

For October 3, 2000

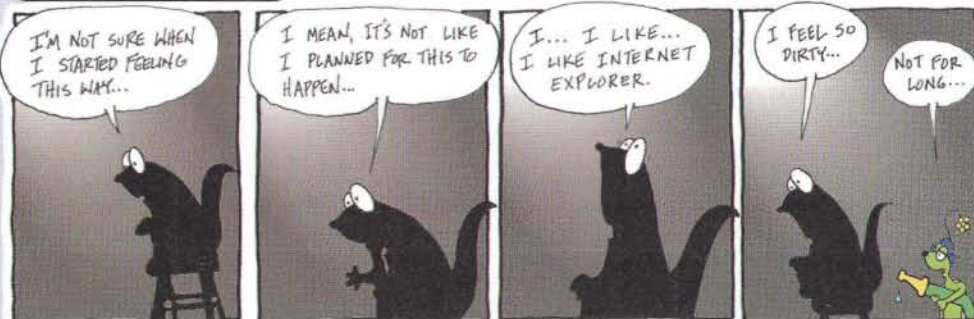
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- 2 **12** **18+** **Everybody Loves Raymond** (CC)—*Comedy* Ray is utterly baffled by Mac OS X's BSD Unix layer, to the amusement of his brother, while Ray's mother Marie surprises everyone with her Unix expertise. (Repeat)
- 3 **13** **MM** **Law and Order** (CC)—*Crime Drama* 1:00 After a wealthy resident of New York's Upper East Side is killed while editing text-based config files, investigators learn that a deadly digital trap is planted deep inside the volume's HFS+ file structure. Michael McKean, Annette O'Toole guest-star.
- 7 **47** **21** **Norm** (CC)—*Comedy* Norm pees on a computer running Windows 2000, causing himself electrical injury in a sensitive area. (Repeat)
- 13 **51** **L7** **Newshour with Jim Lehrer** (CC)—*News* 1:00
- 22 **69** **RC** **Buffy the Vampire Slayer** (CC)—*Drama* 1:00 Buffy battles a rogue Dock that has been sucking the breath from sleeping children, while Oz finds himself attracted to Linux—much to Willow's dismay.
- 38 **1** **OR** **Star Trek: Voyager** (CC)—1:00 Conclusion. Janeway and Seven try to stop a holodeck malfunction, caused when a Classic application bypasses memory protection and runs amok in the holoprojector's Carbon layer, accidentally opening a worm hole to the Alpha Quadrant and threatening a warp-core breach that will disrupt the timeline. (Repeat)

MacAddict Corrections

- +** During an HP press conference announcing a new line of color photo printers, Executive Editor David Reynolds successfully resisted the urge to shout out "Frank Burns eats worms." He regrets his restraint.
- +** While flipping through our July issue, Montana reader Jim McCracken gave himself a nasty paper cut. The smell of blood lured a recently reintroduced pack of rabid jackrabbits to his home, where they mauled McCracken to death. We apologize.
- +** Last month, Apple marketing guru Phil Schiller faked his own death with a mop head and a basketball, presumably to get out of jumping off the Jacob K. Javits Center for a Macworld Expo demo. We're very, very sorry no one noticed.
- +** While our collective heads were turned, bad things happened that were still remotely funny. We're sorry.

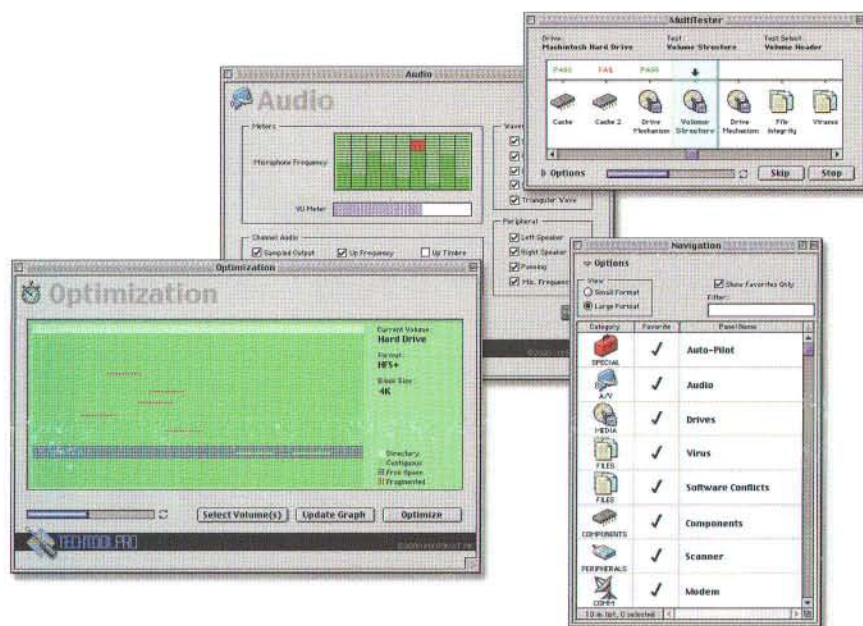
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BY CHUCK DOWNS

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MicroMat's disk repair and Macintosh troubleshooting utility just became a whole lot better. Besides repairing drives, recovering data and checking the health of your Macintosh components, TechTool Pro 3 can now help protect you against virus problems and software conflicts. Version 3 also sports a new modern interface. But the real power of TechTool Pro 3 isn't in the features you can see, it's in the features you can't see. Like a multitude

of new drive repair routines that can save data that other utilities would simply abandon. An improved recovery system that will find lost files in the darkest caverns of a damaged drive. You'll also find improved performance on key features like disk optimization. Simply put, TechTool Pro 3 is the most complete and powerful troubleshooting utility available for your computer. Why settle for anything less?

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iCandy.

The second thing you notice about the new Graphire™ tablets from Wacom is the mouse. Three buttons and a scrolling fingerwheel, no cord to knock over your coffee cup, no ball to clean— and it's five times more accurate than the iMac mouse. The third thing you discover is the famous Wacom pen, complete with DuoSwitch™, built-in eraser and 512 levels of pressure-sensitivity, so you have control over everything from drawing a quick sketch with your free copy of Painter Classic to signing your name.

The first thing you notice, however, is that at under \$100, that blueberry Graphire is looking pretty good. But so is the grape... and the lime... and the tangerine...

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